# JOURNAL

*of the*

# INDIAN MEDICAL ASSOCIATION

VOLUME 25 NUMBER 13 CALCUTTA DECEMBER 1, 1955

Published twice a month from 23, Samavaya Mansions, Calcutta 13. Annual Subscription : Inland Rs. 24/- Foreign Rs. 30/-



*If* YOUR PATIENT IS IN NEED OF
Vitamin B-Complex in a practical form
*PRESCRIBE*

## VIBITON

B. C. P. W. BRAND
POTENT & PALATABLE
VITAMIN B-COMPLEX
*useful in*

Vitamin deficiency resulting in symptoms of fatigue, anorexia and loss of weight, etc.

***VIBITON CONTAINS PER FLUID OUNCE :***

Vitamin $B_1$ (Thiamine Hydrochloride) 16.0 mg., Vitamin $B_2$ (Riboflavin) 4.0 mg., Vitamin $B_6$ (Pyridoxine) 2.0 mg., Vitamin $B_{12}$ 10.0 mcg., Cal. Pantothenate 12.0 mg., Choline Chloride 60.0 mg., Methionine 250.0 mg., Nicotinamide 50.0 mg., Sodi Glycerophos 400.0 mg., Liver Extract (in terms of fresh liver) 80.0 G., Malt Extract qs. and Absolute Alcohol 15% v/v.

25% extra quantities of Vitamin $B_1$, $B_2$, $B_6$ and Nicotinamide are added to compensate loss due to storage.

*Available in 4 oz. phial & 1 lb. bottle*

**BENGAL CHEMICAL** :: CALCUTTA :: BOMBAY :: KANPUR

# ENTEROMYCETIN

CHLORAMPHENICOL U. S. P.

CAPSULES

SYRUP WITH VITAMIN B. COMPLEX

INTRAMUSCULAR

TABLET WITH SULPHA

OPHTHALMIC OINTMENT

**PRESENTATION :**

CAPSULES—250 mg.
Bottle of 12 & 100

INTRAMUSCULAR—250 mg. &
125 mg. amps,
Box of 3 ampoules

SYRUP with vitamin B Complex
Bottle of 60 c.c.

OPHTHALMIC OINTMENT 1%
Tube of 3·5 gm.

TABLET combined with Sulfa
Bottle of 10 tab.

ZAMBON ZEF FARMACEUTICI

*Manufactured by :*

**G. ZAMBON & CO. S.p.A.**

VICENZA ● ITALY

Dey's

*Exclusive Distributors :*

**DEY'S MEDICAL STORES LTD.**

CALCUTTA ● BOMBAY ● DELHI ● MADRAS

IPB

# TABLE OF CONTENTS


| ORIGINAL ARTICLES: | Page |
|---|---|
| 1. Malarial Hepatitis—P. N. Wahi and H. D. Tandon ... ... ... | 507 |
| 2. Pulmonary Presystolic Murmur and its Clinical Significance—L. M. Sanghvi and K. D. Gupta ... | 512 |
| **REFRESHER COURSE:** | |
| Eczema—B. N. Banerjee ... ... ... | 515 |
| **SPECIAL ARTICLES:** | |
| 1. The Mechanism of Heart Failure —Sunita I. Singh and Inderjit Singh ... | 518 |
| 2. Neo-Cardiology—Rustom Jal Vakil ... | 520 |
| 3. Modern Conception of Endobronchial Tuberculosis and its Treatment—J. K. Nag ... | 523 |
| **CASE NOTES:** | |
| 1. Intraligamentary Secondary Abdominal Pregnancy—S. K. Sur Roy and N. Roy Choudhury ... ... ... | 525 |
| 2. Intra-uterine Death of Foetus followed by Massive Infection of the Uterus —N. Subhadra Devi ... ... ... | 528 |

| CASE NOTES (Contd.): | Page |
|---|---|
| 3. Spontaneous Passage of a Big Vesical Calculus in a Female—M. Rajeswari and D. Shamanna ... ... ... | 529 |
| 4. Prolonged Use of Pethidine Causing Temporary Psychosis—B. B. Mukherjee ... | 530 |
| **EDITORIAL:** | |
| Keep the Flag Flying ... ... ... | 531 |
| CURRENT MEDICAL LITERATURE ... ... | 532 |
| CURRENT TOPIC ... ... ... | 535 |
| NOTES AND NEWS ... ... ... | 538 |
| CORRESPONDENCE ... ... ... | 540 |
| REVIEWS ... ... ... ... | 540 |
| **SUPPLEMENT:** | |
| XXXII All-India Medical Conference, Jaipur, 1955 ... | 541 |
| Branch Notes ... ... ... | 542 |



...a new and superior broad-spectrum antibiotic

now in Ointment form for topical application

...is effective against both Gram-positive and Gram-negative organisms, including streptococci, staphylococci, and the coli-aerogenes group.

**PACKAGE:**

½ oz. tube (containing 30 mg. per Gm. (3%) of Tetracycline Hydrochloride in a petroleum-wool fat base).

Achromycin*

HYDROCHLORIDE TETRACYCLINE HCl CRYSTALLINE

Ointment Lederle

**ACHROMYCIN**

...is applied directly to the involved area, preferably on sterile gauze, for:

- Treatment of superficial pyogenic infections of the skin
- Prevention of infections in wounds
- After surgery

*Trade Mark

Lederle

**Lederle Laboratories (India) Ltd.,** P. O. B. 1994, Bombay 1

# "Total extract is more rational in Rauwolfia therapy than alkaloids."

— HOARE H.B.
IND. MED. REV. 1955. 27. 349.

**All workers carrying pharmacological investigation on Rauwolfia Serpentina have reported in one voice that total extract containing all alkaloids and resin fraction is far more potent than the alkaloids. The latest of these scientific investigators is Hoare who reports after exhaustive study of the different derivatives of the plant :**

"... With these experiences gained from comparative studies of the various components of the drug it can be concluded that the total extract is more rational than the alkaloids and Bromo-Raulfin rightly occupies a prominent place among Rauwolfia preparations."

**Manufactured by a pioneer of Rauwolfia research**

**Bromo-Raulfin contains per dram :**

| | |
|---|---|
| *PSYCHIC SEDATIVE* | |
| Rauwolfia Resin ... | 1·0 mg. |
| *HYPOTENSIVE ALKALOIDS* | |
| Ajmaline ... | 0·5 mg |
| Ajmalinine ... | 0·25 ,, |
| Ajmalicine ... | 0·4 ,, |
| Serpentine ... | 0·4 ,, |
| *BALANCING ALKALOID* | |
| Serpentinine ... | 0·4 ,, |
| *ADDITIVES* | |
| Mist. Pot. Brom. et Valeriana B. P. C. | 3 ml. |
| Ext. Glycyrrhiza Co. | 0·3 ,, |

*Please write for our publication :*
**A Treatise on Rauwolfia Serpentina**
**( Revised edition )**

*The classical Total Extract preparation*

# BROMO-RAULFIN

*all alkaloids & resin fraction*

**EASTERN DRUG CO. LTD.**
CALCUTTA-27

Eastern Drug

22-9-159.

## INDEX TO ADVERTISERS


| | Page |
|---|---|
| Alembic Chemical Works Co. Ltd. | xxviii |
| Antiseptic | xxx |
| Atlantis (East) Ltd. | xi |
| Bengal Chemical & Pharm. Works Ltd. | Front Cov. |
| Birla Laboratories | xxx |
| Boots Pure Drug Co. (I) Ltd. | xxiii |
| British Drug Houses (India) Ltd. | xxxi |
| Calcutta Chemical Co. Ltd. | Back Cov. |
| Calcutta Clinical Research Assn. Ltd. | xxxi |
| Cipla Ltd. | x |
| Dunlop Rubber Co. (I) Ltd. | xvi |
| Eastern Drug Co. Ltd, | ii |
| Dumex Ltd. (East Asiatic Co.) | xxii |
| East India Pharmaceutical Works Ltd. | xx |
| Fedco Ltd. | xxi |
| Franco-Indian United Laboratories | vi |
| G. Zambon & Co. S. p. A. (Dey's Medical Stores Ltd.) | 2nd Cov. |
| German Remedies & Trading Co. Ltd. | iii,xxvii |
| Glaxo Laboratories (India) Ltd. | ix |
| Himalaya Drug Co. | xxiii |
| Hind Chemicals Ltd. | xiv |
| Horlicks Ltd. | xv |
| Indian Health Inst. & Laboratory Ltd. | iv |
| Infa Ltd. | vii |
| I. M. S. Laboratory Ltd. | xiv |
| Indo-Pharma Pharmaceutical Works | xxix |
| John Wyeth & Brother Ltd. | xxxii |
| Khatau Valabhdas & Co. | xxv |
| Lederle Laboratories (I) Ltd. | i |
| Mac Laboratories Ltd. | 3rd Cov |
| Mandoss Drugs Co. | iv |
| Martin & Harris Ltd. | xix |
| May & Baker (India) Ltd. | xiii |
| Meiji Seika Kaisha Ltd. | iv |
| Methods of Surgery by Dr. T. Kanakaraju | iv |
| Mysore & Industrial Testing Laboratory | xxxi |
| Nestle's Products (I) Ltd. | xviii |
| Pharmed Ltd. (Menley & James Ltd.) | xxiv |
| Riker Laboratories | viii |
| Pfizer Eastern Corporation (Ravison Pharmaceuticals Ltd.) | xvii,xxvi |
| Raptakos, Brett & Co. Ltd. | xxv |
| Sanitex Chemical Industries Ltd. | xxix |
| Scientific Publication Concern | xxxi |
| Stadmed Ltd. | xii |
| Voltas Ltd. | v |
| W. T. Suren & Co. Ltd. | xii |



# HOMBURG

# PHOSVITANON

**The Well-Balanced Vitamin Tonic and Health Restorer with The Pleasant Taste**

- PHOSVITANON contains vegetable ingredients along with the essential blood-forming metals and optimum quantities of Vitamin $B_1$.
- PHOSVITANON stimulates the metabolism, yet acts as a damper in case of excessive excitability. It gives overall health and strength to the system.

**GERMAN REMEDIES & TRADING CO., LTD.**

P. O. Box No. 1945, Bombay-1.

Meiji

*Leading Producers in Japan*

**STREPTOMYCIN MEIJI**

**PENICILLIN MEIJI**

**MYCILLIN MEIJI**

Containing crystalline procaine penicillin G 300,000 units, buffered crystalline penicillin G potassium 100,000 units, crystalline dihydrostreptomycin sulfate 0.5 Gm (dihydrostreptomycin base.)

Debut of a New **ANTI-CANCER** Antibiotic

**SARKOMYCIN MEIJI**

**INDICATIONS :**

Cancer of Breast, Uterus, Ovary, Stomach, Intestine, Lungs, Thyroid Gland, Upper Jaw, Tongue, Oral mucous membrane, Liver, Penis, Gullet, Pancreas, Sarcoma of bone, Reticulocoma and other tomurs.

**CLINICAL EFFECTS:**

Improvement of appetite, increase in body weight and general comfort.

Histologically the decrease in mitosis, total disappearance of cells, the formation of vacuols, swelling and contraction of cells are observed.

**CONTRAINDICATIONS:** SARKOMYCIN MEIJI can be used for any potient without any concern of contraindications.

**MEIJI SEIKA KAISHA, LTD.**

**EXPORT DEPT.**

No. 8, 2-chome, Kyobashi, Tokyo, Japan. Cable Add. "EMUES TOKYO"

*Coming Shortly !* *Await Publication !*

**METHODS OF SURGERY**

**A text book valuable to Students, Practitioners and Specialists alike.**

Prepared on the basis of personal knowledge of teaching and close contacts with Professors of Surgery and Surgical Clinics all over the world.

By

Dr. T. Kanakaraju, F.R.C.S. (E), F.I.C.S.

**CALCIDOXON**

(Calcium Gluconate with Vitamin-C)

| | (5 c.c. Contains) | (10 c.c. Contains) |
|---|---|---|
| Calcium Gluconate | 10 % | 10 % |
| Vitamin C | 100 mg. | 200 mg. |

Indicated in pregnancy, lactation, periods of rapid growth, febrile conditions, Old age convalescence and debility states, in Haemorrhagic & development of teeth & bones.

One ampoule to be injected daily or alternate days intramuscularly or intravenously as directed by the physician.

**LIVAFOLBIN**

(Liver Ext. cum Folic Acid with Vitamin B12)

| | (2 c. c. Contains) |
|---|---|
| Liver Extract | 90 gm. |
| Folic Acid | 7.5 mg. |
| Vitamin B12 | 25 mcg. |

**Indication:** Acute pernicious anaemia, Macrocytic anaemia, Sprue. Subnormal growth in children is reported to respond to Vitamin B12. Increased appetite were noted in the patients treated and also for the functioning of bone marrow.

**Dosage:** To be injected intramuscularly 2 c. c. daily or alternate days as directed by the physician.

**Packing:** 2 c. c. amps. & 10 c. c. & 30 c. c. R. G. Phial.

**MANDOSS DRUGS LTD.,**
221/2, Strand Bank Road, Calcutta-1.

**FOR SURE THERAPEUTIC EFFECTS**

**in TUBERCULOSIS**

**HEALTH**

**ISOCYL**

*is a drug of choice*

*containing per Tablet :*

| | |
|---|---|
| Calcium P. A. S. (anhydrous, Neutral) | 7.5 gr. |
| Isonicotinic Acid Hydrazide | 15 mg. |
| Vitamin A | 1000 I.U. |
| Vitamin C | 15 mg. |
| Vitamin D, | 500 I.U. |
| Vitamin $B_1$ | 1.0 mg. |
| Vitamin $B_2$ | 1.0 mg. |
| Vitamin $B_{12}$ | 0.25 mg. |
| Vitamin K | 0.8 mg. |
| Calcium Pantothenate | 0.5 mg. |
| Niacinamide | 5 mg. |

A scientific combination of Calcium P.A.S., Isonicotinic Acid Hydrazide and Vitamins. Acts as a specific remedy specially in Streptomycin resistant cases.

Dose : 12 to 20 Tablets daily or as advised by the Physician.

Packings : 100 Tablets in a Phial.

**Indian Health Institute & Laboratory Ltd.**

**DUM DUM CANTT. CALCUTTA-28.**

RHODIA
BRAND

RHÔNE-POULENC / SPECIA
21, RUE JEAN GOUJON - PARIS - FRANCE

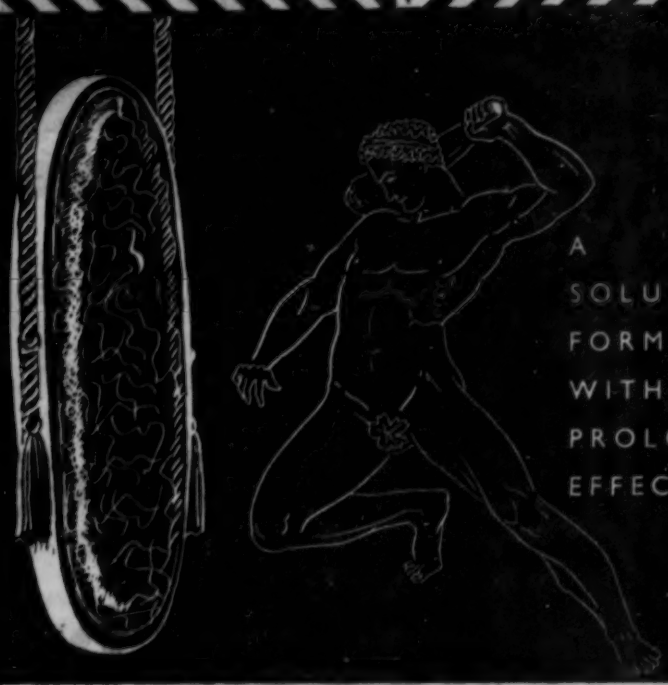
# DIDROMYCINE
Dihydrostreptomycin
base as sulphate

# DIDROSTREPTINE
Association of
Dihydrostreptomycin and Streptomycin

# P. A. S.
Powder - Tablets

SOLE IMPORTERS:

| | |
|---|---|
| INDIA<br>Voltas Limited | Bombay - Calcutta-Madras - Cochin-Delhi-Kampur |
| PAKISTAN<br>Volkart Brothers | Karachi - Lahore-Chittagong |
| CEYLON<br>Volkart Brothers | Colombo |



A SOLUBLE FORM WITH PROLONGED EFFECT

# Sterandryl-Retard

TESTOSTERONE HEXAHYDROBENZOATE

*only one injection per month*

Box of 2 ampoules containing 50 mg. each of Testosterone Hexahydrobenzoate in oily solution.

**intra-muscular route**

One to two ampoules per injection

**LABORATOIRES ROUSSEL**

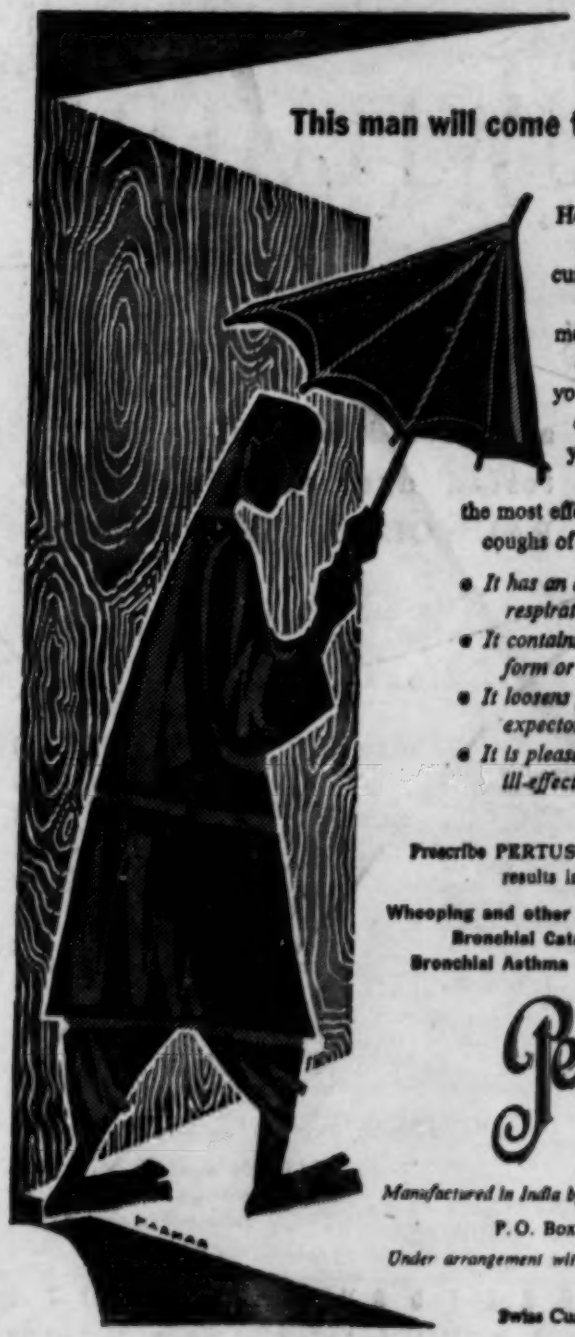
LABORATOIRES FRANCAIS DE CHIMIOTHERAPIE

PARTICULARS, LITERATURE, ETC. FROM

**FRANCO-INDIAN UNITED LABORATORIES**

"Bapnu Ghar", Hornby Vellard,

**BOMBAY 18**



## This man will come to you tomorrow

He is a man with a cough and he will expect YOU to cure it for him. He is not very concerned with the methods you use—he is interested only in the results you achieve. And *that* of course will depend on what you prescribe. You will find that PERTUSSIN is the most effective remedy for coughs of all kinds because—

- *It has an antiseptic action on the respiratory tract*
- *It contains no narcotics, chloroform or creosote*
- *It loosens phlegm and makes expectoration easy*
- *It is pleasant-tasting and has no ill-effects on digestion*

**Prescribe PERTUSSIN for rapid results in the treatment of**

**Whooping and other Coughs**
**Bronchial Catarrh**
**Bronchial Asthma**

Pertussin
„TAESCHNER"

*Manufactured in India by* **inja LTD.** inja
P. O. Box 1041, BOMBAY-1
*Under arrangement with* **ETSPHA LTD.,**
Schaan, Liechtenstein
**Swiss Custom and Economic Territory**

# RAUWILOID

**a purified and biologically tested extract of . . . . RAUWOLFIA SERPENTINA**

**RAUWILOID** is not the crude Rauwolfia root. Rauwiloid represents the total hypotensive activity of pure whole Rauwolfia serpentina root, freed from inert matter and the undesirable side-effects of the yohimbine type alkaloids.

**RAUWILOID** is not merely a single alkaloid of Rauwolfia. Rauwiloid provides the balanced action of the several potent alkaloids in Rauwolfia; reserpine, regardless of the brand name under which it is marketed, is only one of the desirable alkaloids in Rauwiloid.

**RAUWILOID** contains besides reserpine other active alkaloids such as Rescinnamine* reported to be equally hypotensive but less sedative than reserpine.

RIKER

## *indications*

*Rauwiloid presents Rauwolfia in its optimal form for the treatment of essential hypertension. In severe, malignant cases its greatest value lies in its ability to ameliorate the side-effects of the more potent anti-hypertensives.*

Dosage is simple—two tablets nightly.

* *References :*

1. Cronheim, G., Brown, W., Cawthorne, J., Tookes, M.L., and Ungari, J., Proc. Soc. exp. Biol. N.Y. (1954) 66 : 120.
2. Kloha, M.W., Draper, M.D., and Keller, F., J. Amer. Chem. Soc. (1954) 76 : 2843

*Detailed literature will be gladly sent on request.*

**MARTIN & HARRIS LTD.**
Mercantile Buildings
Lall Bazar Street, Calcutta

*'RAUWILOID' is a Registered Trade Mark. Regd. Users :*

**RIKER LABORATORIES LIMITED**
LOUGHBOROUGH LEICS. ENGLAND

SINGLE OR COMBINED

Today it is possible to protect against whooping cough and diphtheria, the two most dangerous diseases of infancy and childhood. And in India, where the death-rate due to tetanus is high, early prophylaxis with tetanus toxoid is recommended.

Glaxo Laboratories offer single and combined antigens for immunisation against whooping cough, diphtheria and tetanus.

**WHOOPING COUGH VACCINE**
'GLAXO'
3 injections at monthly intervals.

**DIPHTHERIA PROPHYLACTIC**
'GLAXO'
2 injections at an interval of one month.

**DIPHTHERIA-PERTUSSIS PROPHYLACTIC**
'GLAXO'
3 injections at intervals of one month.

**TRIPLE ANTIGEN**
'GLAXO'
(Diphtheria-Tetanus-Pertussis Prophylactic)
3 injections at intervals of one month.

*All preparations are issued in boxes of 3 × 1 cc. ampoules, except Diphtheria Prophylactic 'Glaxo' which is available in 3 cc. vials.*

GLAXO LABORATORIES (INDIA) LTD.,
BOMBAY • CALCUTTA • MADRAS • NEW DELHI

D.1

# Latest Treatment for HYPOCHROMIC ANAEMIA

with...

MOLYBDENUM
COLLOIDAL IRON
COBALT & COPPER
MANGANESE
FOLIC ACID

JUDICIOUSLY COMBINED IN

## 'COBAFERON'

PACKING
BOTTLES OF
4 OZ. & 1 LB.

A PRODUCT OF Cipla BOMBAY-8.

LITERATURE & SAMPLE SENT ON REQUEST

"Cipla Sales Depot"
P-33, Ganesh Ch. Avenue, Calcutta-12

# 'DETTOL' *for Protection*

- Disinfection of instruments.
- Washing and disinfecting hands.
- Pre-operative skin disinfection—and wherever there is danger of infection.

*Write for FREE 'DETTOL PRODUCTS' booklet.*

**ATLANTIS (EAST) LTD., P.O. Box 664, Calcutta-1**

# T.C.F. VITAMIN B-COMPLEX

**ORAL-LIQUID** (Including Vitamin $B_{12}$)
(Mainly derived from *natural sources*)

**PARENTERAL**
(Vitamin $B_1$, $B_2$, Niacinamide, $B_6$, Choline and d-Pantothenyl Alcohol with liver base)

**TABLETS**
(Vitamin $B_1$, $B_2$, Niacinamide, $B_6$ and Calcium Pantothenate)

Products of: TEDDINGTON CHEMICAL FACTORY LIMITED, BOMBAY
Sole Distributors: W. T. SURÉN & CO. LTD., P.O. Box 229, Bombay 1.

BTA.92743

*Stadmed*

# AMINOZYME

*Amino acids cum Enzymes*

*Supplies* Essential Amino Acids, Vitamins and Enzymes *for* SOUND NUTRITION

*Each fluid ounce contains :*

| | | | |
|---|---|---|---|
| Amino Acids | 6000 mg. (20 p.c. W/V) | Nicotinic acid amide (P.P.) | 20 mg. |
| | | Ascorbic Acid (Vit. C) | 20 mg. |
| Folic Acid | 1·5 mg. | Proteolytic Enzyme | 10 grs. |
| Vitamin ($B_1$) | 400 I.U. | Amylolytic Enzyme | 5 grs. |
| Riboflavin ($B_2$) | 0·5 mg. | Lipolytic Enzyme | 5 grs. |
| Pyridoxine ($B_6$) | 0·5 mg. | with other necessary adjuvants. | |

INDICATIONS :

Protein deficiency due to malnutrition, Typhoid and other infectious diseases. Gastro-enteritis, Peptic Ulcers, Liver Cirrhosis, Dyspepsia, Chronic Amœbiasis, Flatulence, Pre and Postoperative managements. Nutritional Œdema, Anæmias, Tuberculosis etc., etc.

*Sole Distributors :*
Stadmed Distributors Ltd., Calcutta 4

STADMED LIMITED, CALCUTTA 4

# *Effective cough control with*

# 'PHENSEDYL'

COUGH LINCTUS

—the NEW **M&B** brand Medical Product containing promethazine, codeine and ephedrine.

Here is a rational and really effective cough linctus designed for the relief of coughs of various types.

**(1) In refractory post-influenzal types**

The central sedative and local analgesic effects of promethazine are supported by the inhibitory effect of codeine on the cough reflex.

**(2) In allergic and "asthmatic" coughs, bronchitis, and whooping-cough**

The antihistamine effects of promethazine plus the bronchodilator action of ephedrine make 'Phensedyl' particularly valuable. In addition, the anti-emetic action of promethazine helps to control the vomiting associated with whooping-cough.

What is more, 'Phensedyl' is both attractive in appearance and pleasant to take—important factors, particularly when prescribing for children.

'Phensedyl' is supplied in bottles of 4 fl. oz.

*Detailed information is available on request*

*Manufactured by*

**MAY & BAKER LTD**

MA3960-55

*Distributed by:* MAY & BAKER (INDIA) LTD. BOMBAY · CALCUTTA · GAUHATI · MADRAS · NEW DELHI

## Recipe of To-day

# DI-PEPEX

VITAMINISED DIGESTANT OF CARBOHYDRATE & PROTEIN FOOD

Composition : Taka-diastase, Pepsin & Vitamin B-Complex

Available in 4 oz, 8 oz & 16 oz, Packings

# VIM-COD-CO

UNIQUE LUNG & GENERAL TONIC

Composition :- Codliver oil, Ferri et Ammon Citras, Sodium Hypophosphite, Peptone, Pot. Guaicol Sulphonate, Extracts of Fresh Liver, Pancreas & Spleen & Creosote

Available in 1 lb Amber bottle covered by red cellophane paper.

ETHICAL MEDICINE

*Produced by —*

**I. M. S. LABORATORY LIMITED**

5, ROYAL EXCHANGE PLACE, CALCUTTA-1. *Works :* Amausi (Lucknow).

# HI-NUTRON

*restores nitrogen equilibrium*

The negative nitrogen balance in illness leads to breakdown and excretion of body proteins like those of the muscles; the patient gets thinner every day.

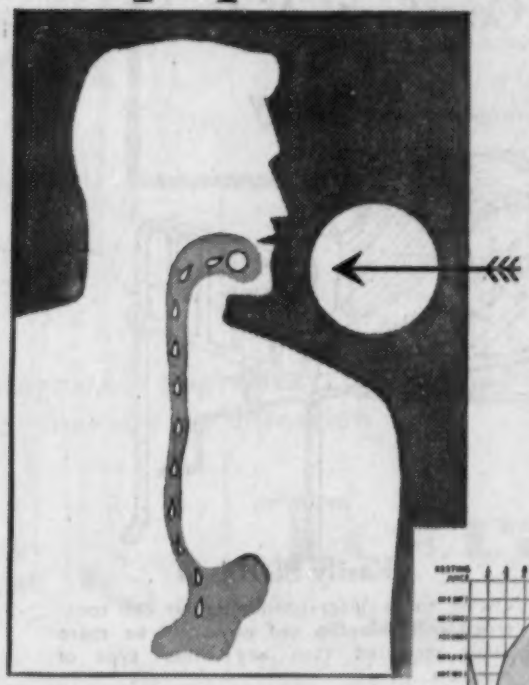
HI-NUTRON restores the nitrogen equilibrium preventing waste during illness and aiding convalescence.

HI-NUTRON contains the protein 'Myosin' which provides all the essential amino acids.

Ampoules of 5 and 10 cc.

**HIND CHEMICALS LTD, KANPUR.**

# The key to successful peptic ulcer therapy



WHENEVER continuous neutralization of gastric acidity is required—in active and quiescent peptic ulcer, gastritis, hyperacidity—NULACIN TABLETS are indicated.

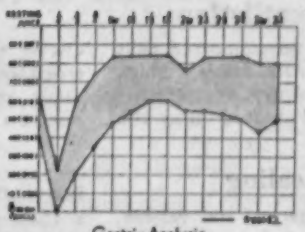
The successful clinical behaviour of NULACIN TABLETS is accounted for by their composition and unique manner of use.

## *Dosage*

Beginning half-an-hour after food a NULACIN TABLET should be placed in the mouth and allowed to dissolve slowly.

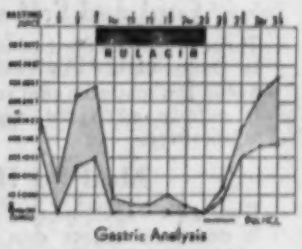
During the stage of ulcer activity up to three tablets an hour may be required. For follow-up treatment the suggested dosage is one or two tablets between meals.

NULACIN TABLETS are not advertised to the public and there is no B.P. equivalent. NULACIN TABLETS are available in dispensing units of 12 & 25 tablets.



Gastric Analysis

*Superimposed gruel fractional test-meal curves of five cases of duodenal ulcer.*




Gastric Analysis

*Same patients as in Fig. 1 two days later, showing the striking neutralizing effect of sucking Nulacin tablets (3 an hour). Note the return of acidity when Nulacin is discontinued.*


*REFERENCES*

*Medical Treatment of Peptic Ulcer, Med. Press, 27th Feb., 1952, 227 : 195*

*The Control of Gastric Acidity, Brit. Med. J., 26th July, 1952, 2 : 180*

*Notes on Remedial Agents, Med. Review, Sept., 1952, 46 : 162*

*Discussion on Peptic Ulceration, Proc. Roy. Soc. Med., May, 1953, 46 : 354*

*The Effect on Gastric Acidity of "Nulacin" Tabs., Med. J. Aust., 28th Nov., 1953, 2 : 823*

*Control of Gastric Acidity by a new way of Antacid Administration, J. Lab. Clin. Med., Dec., 1953, 42 : 955*

*Further Studies on the Reduction of Gastric Acidity, Brit. Med. J., 23rd Jan., 1954, 1 : 183*

*Clinical Investigation into the Action of Antacids, Practitioner, July, 1954, 173 : 46*

*Management of Peptic Ulceration in General Practice, Med. World, Dec., 1954, 2 : 591*

HLN 3986 Rev.

# NULACIN

**HORLICKS LIMITED**
**4 Mission Row (P.O. Box 2229)**
**CALCUTTA**

# Dunlopillo Comfort Aids Recovery

## Cool and Self-ventilating

Through the millions of inter-connected cells in Dunlopillo air can circulate freely, which keeps the mattress cool and dry. Perspiration is quickly dissipated and passed into the atmosphere.

## Ideal for Healing

Dunlopillo repels moths, germs and vermin. It does not collect dust, and is, therefore, particularly beneficial in cases of asthma and hay fever. The easily compressible surface of Dunlopillo makes bed pans easier to manipulate. The smooth, uniform surface and porosity permit free functioning of the pores and so prevent bed sores.

## Easily Sterilised

Owing to its inter-connecting air cell construction Dunlopillo can obviously be more easily sterilised than any other type of mattress.

## Lasting Resilience

Practically indestructible under proper usage, a Dunlopillo mattress will never sag or lose shape. For long-term economy and comfort there is nothing to compare with Dunlopillo.

# Dunlopillo

*Mattresses*

*Pillows*

*Pads for Labour Beds*

*Cot Mattresses for Babies*

*Operating Table Pads*

*Stretcher Pads etc.*

DPX 66

# Treat the Patient as a whole...

In treating patients with stress† induced by infection, the modern approach emphasizes the logic of a dual clinical approach. In full recognition of this principle, Pfizer offers this new preparation for

***S**peedier control of infection*
***F**aster convalescence*

**An integrated approach to the therapy of infection**

# Tetracyn* SF*

brand of tetracycline with vitamins

**CAPSULES**
250 mg. . . . bottles of 8, 16, & 100

**ORAL SUSPENSION** *(fruit flavored)*
125 mg. per teaspoonful — 2 fl. oz. (60 cc.) bottles.

Specific antimicrobial therapy of choice for rapid control of the growth of pathogenic invaders.
Specific nutritional fortification to bolster body defenses and speed recovery.

**S**pecific nutritional **F**ortification combined with specific antimicrobial therapy offers:

■ prompt eradication of pathogenic organisms ■ reduced susceptibility to disease ■ speedier detoxification ■ Facilitation of tissue repair ■ fewer complications ■ quicker recovery ■ even better tolerability, *and restores the patient to good health more rapidly.*

†*Stress,* as referred to herein, is a state in which the metabolic demands of the body are increased as a result of infection.

Pfizer

*World's Largest Producer of Antibiotics*

VITAMIN-MINERAL FORMULATIONS
HORMONES

* Trademark of Chas. Pfizer & Co. Inc.

**PFIZER EASTERN CORPORATION,** NEW YORK · PANAMA · BRUSSELS
*Exclusive Distributors in India:*
**RAVISON PHARMACEUTICALS LTD.,** P. O. BOX 1636, BOMBAY 1.

Trusted throughout the world for their purity and reliability

NESTLÉ'S

PRODUCTS

Full cream milk pasteurised and then concentrated with added sugar to the degree necessary to secure a good keeping quality

A dried combination of milk and extracts of malted barley and wheat flour, fortified with added Vitamin $B_1$.

Whole milk, modified especially for infant feeding, with added Vitamins A & D, and iron, pasteurised, homogenised and dried by spray process.

Partially separated milk in powder form (with starch added), acidified by a selected culture of lactic ferments to produce a reconstituted buttermilk.

Whole milk, pasteurised, homogenised and dried by a spray process.

An anti-diarrhoeic specific derived from the carob bean, specially recommended for treatment among infants.

Various preparations of cooked and sterilised homogenised foods, such as carrots, spinach, plums, prunes, etc., intended as the first solids for infant feeding.

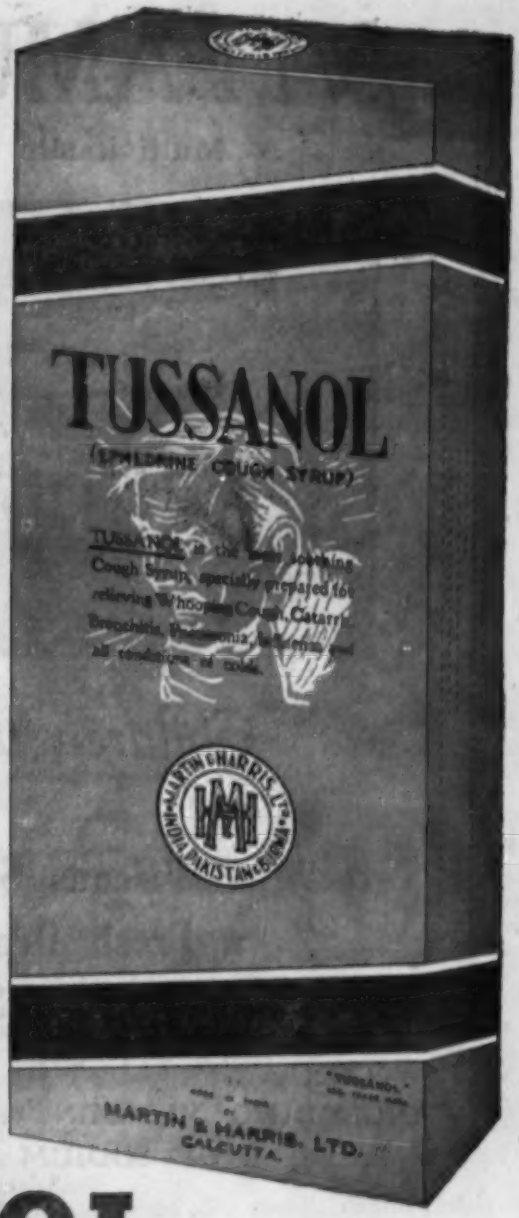
A concentrated food, containing whole milk solids, cocoa, sugar and malted cereal, fortified with vitamins and mineral salts.

NESTLE'S PRODUCTS (INDIA) LTD.

P.O. Box 315, Bombay., — P.O. Box 396, Calcutta.,
P.O. Box 180, Madras.

NCA/3

# Cough!




**when diagnosis demands a cough remedy a majority of physicians prescribe**

# TUSSANOL

**( COUGH SYRUP )**

***THE SAFEST REMEDY FOR PATIENTS OF ALL AGES***

**A MARTIN & HARRIS PRODUCT**

# VITAMULSON

**A Multivitamin Mineral Tonic**

*Children will like it*

*for its*

★ **Viscous Syrupy Base**

★ **Fresh Orange Flavour**

★ **Slightly Sour Taste**

CONTAINS ALL THE ESSENTIAL VITAMINS, INCLUDING VITAMIN $B_{12}$, WITH HYPOPHOSPHITES OF SODIUM & CALCIUM.

*For further particulars, please write to :—*

**East India Pharmaceutical Works Ltd.**

BOMBAY–14. CALCUTTA–26. MADRAS–1.

Journal of the
Indian Medical Association

Vol. 25, No. 13 CALCUTTA PUBLISHED TWICE A MONTH December 1, 1955

*ORIGINAL ARTICLES*

# MALARIAL HEPATITIS

P. N. WAHI, M.D., M.R.C.P. (LOND.)
AND
H. D. TANDON, M.D.,
*Liver Diseases Research Unit, Department of Pathology,*
*S. N. Medical College, Agra.*

The generally described pathological picture of the liver in human malaria represents mostly the serious forms ending fatally and reaching the autopsy room. Grossly such livers are soft, slightly enlarged, dark red and congested. The cut surface is moist and bleeds easily. Haemorrhages are however uncommon even in fatal cases. Similar gross pathological changes have been noted in malaria in monkeys and birds (Talliaferro and Mulligan, 1937). In chronic malaria, the colour of the liver has been noted to be darker or slaty and the lobular markings have been observed as accentuated on the cut surface.

Cloudy swelling with varying degrees of vacuolation, fatty degeneration atrophy and necrosis have been reported in liver in acute fatal malaria and in cases having relapses. The changes reported range from necrosis in individual cells to definite foci of necrosis in central zones or distributed irregularly, which may be associated with definite cellular infiltration in the damaged tissues (Telcharor and Todorowa, 1950). Craig (1909, 1926) reported haemorrhage near the central vein. Maegraith (1948) also commented on the atrophy and necrosis of liver cells around the central zone of the liver lobule making the picture resemble that of passive venous congestion of cardiac failure. He also postulated a theory of local vascular reflex arising out of a general vasomotor dysfunction, which would cause constriction of the smaller radicles of hepatic vein and interference with the escape of hepatic venous blood, thus leading to the engorgement of the central zone of the hepatic lobule and anoxic change in the parenchymal cells in that zone.

Many workers have noted hypertrophy and hyperplasia of the reticulo-endothelial cells of the sinusoids of the liver in acute stage of malaria. Taliaferro and Mulligan (*loc. cit.*) reviewed the literature on the role of phagocytic cells, the occurrence of pigment and degenerative and reparative change in this condition.

Malarial pigment has been found only in the Kupffer cells chiefly in the periphery of the lobule. It has not been seen in hepatic cells, either in human malaria or in experimentally induced malaria in the animals. Haemosiderin has frequently been found in large quantities inside the liver cells both in acute as well as chronic malaria.

In some of the early cases of malaria, periportal cellular infiltration has been noted (Fredrick and Hoffbauer, 1945 ; Marchiafava and Bignami, 1900). Hyperplasia of the perivascular connective tissue has been observed in the more advanced stages.

The association of fibrosis with malaria has been commented upon by several workers, though its causative role has been a matter of dispute. Walters and Waterlow (1954) found coarse periportal and intraportal fibrosis in more than half of

the West African children examined. Although there was no concrete evidence that malaria had induced these changes, it was incriminated as almost every Gambian child is infected by the time it is 2 years old and the clinical evidence presented by McGregor (quoted by Walters and Waterlow, 1954) points to malaria as the cause of hepatosplenomegaly, so frequently observed.

The role of malaria in production of hepatic fibrosis has been a controversial issue. According to Hance (1938), the French schools have advocated the concept that a chronic malaria infection can cause a true malarial cirrhosis. However, this view has been challenged by several workers in recent years. The recent observations of Diaz (quoted by Walters and Waterlow, 1954) that malaria may certainly predispose the liver to injury by other agents but by itself is incapable of playing a cirrhogenic role, probably express the more acceptable school.

The nature of fibrosis produced by malaria is also a matter of dispute. Marchiafava and Bignami (*loc. cit.*) were emphatic that the changes seen by them in chronic malarial splenomegaly were distinct from even an early stage of Laennec's type of cirrhosis. Nicholls (1913) stated that malaria caused a monolobular type of cirrhosis resembling what is presently known as periportal fibrosis. Tirumurthi and Rao (1934) demonstrated a thickening of fibrous tissue in the portal tracts and linkage of adjacent tracts by strands of thickened reticulum. Ionesco and Popper (quoted by Walters and Waterlow, 1954) described almost similar changes and only rarely did they note an intralobular encroachment by the fibrous tissue. Vint (1931) in his review of 100 postmortem specimens of malarial livers also described a very similar monolobular cirrhosis which began with a lymphocytic infiltration and thickening of the connective tissue around the portal tracts. Similar but less advanced changes were described by Telcharor and Todorowa (*loc cit.*) in a study of serial biopsies from 45 cases of chronic malaria.

## Material and Methods

The material presented consists of liver biopsy studies on 34 cases of malaria. The duration of illness ranged from two weeks to twenty years. The diagnosis of malaria was made clinically with a characteristic history of periodicity of fever, and parasites were detected in the peripheral blood in 21 cases, particularly those with a history of acute episode. In the cases where parasites were not detected in blood, the clinical history, the endemicity of the disease in the area to which the patient belonged, the periodicity of fever, the association with splenic enlargement and exclusion of other cause of splenomegaly like kala-azar etc. by laboratory tests formed the evidence of our diagnosis of malaria.

Spleen was enlarged in all cases, the enlargement varying from 3 finger-breadths to 8 inches below the subcostal margin. Hepatomegaly was present in 24 out of 34 cases. When enlarged, the liver was firm to the feel and only in some cases tender.

The biopsies were done in most cases with the Vim Silverman's needle. In some cases, the Roholm-Iverson's needle was used. The tissue obtained was fixed in formol-saline and processed in the autotechnicon. Paraffin sections were prepared and were stained with haematoxylin and eosin, van Gieson's stain for connective tissue, and Foot's reticulum stain. In many instances the sections of the biopsies from cases of chronic malaria were stained by Shortt and Cooper's modification (1948) of McNamara's method for protozoal parasites.

## Results

Reticulo-endotheliosis comprised the commonest change encountered. This change was present in every case in varying degrees and was particularly severe in chronic cases with enlarged spleens. It was characterized by the increase in number and size of the individual reticulo-endothelial cells, which were usually found separated from the liver cell plates and bulging into the lumina of the sinusoids (Fig. 1, *vide* Plate). In extreme cases the sinusoids were almost completely plugged by clumps of proliferating cells. Malarial pigment was not consistently seen. Where present mostly in the more chronic cases, it was seen in the Kupffer cells. The light brown pigment often obscured the cellular details. Infiltration of the sinusoids with lymphocytes and monocytes was not a constant feature as was reported by McMohan *et al* (1954). Such cells with sharp, round and somewhat hyperchromatic nuclei cannot be distinguished from proliferating reticulo-endothelial cells. It is of note that reticulo-endothelial proliferation was seen in fair degree in a case with only two week's duration of fever and no past history of malarial attacks.

Diffuse parenchyimal damage was the next frequent alteration being present in 30 out of 34 cases. It was characterized by dissociation of liver cell plates, unusual variation in the size of cells and nuclei, irregular staining of the cytoplasm

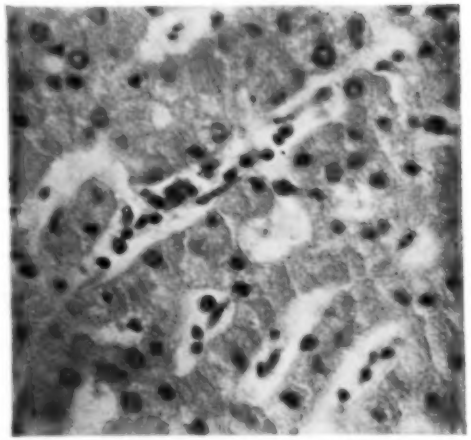


Fig. 1—Section of the liver showing proliferated reticulo-endothelial cells. H & E × 430.

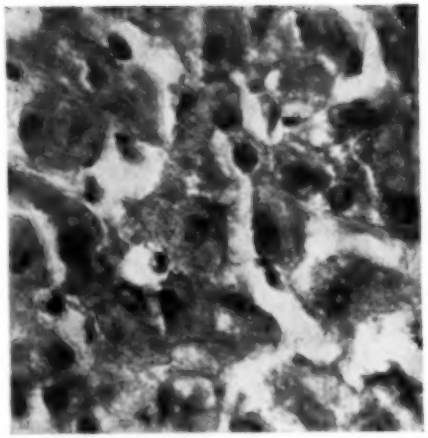


Fig. 2—Section of the liver showing diffuse parenchymal damage. H & E × 430.

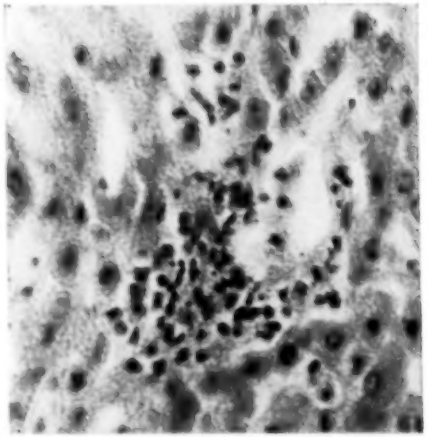


Fig. 3—Section of the liver showing focal necrosis. H & E × 430.

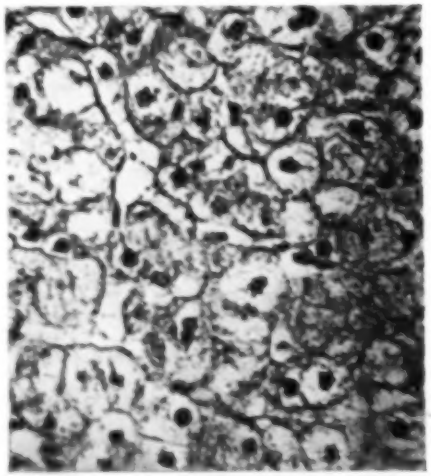


Fig. 4—Section of the liver showing cytoplasmic rarefaction of extreme degree. H & E × 430.

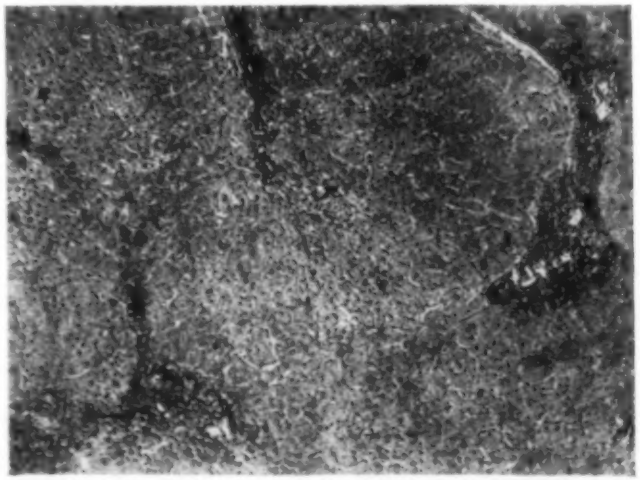


Fig. 5—Section of the liver showing portal fibrosis. H & E × 50.

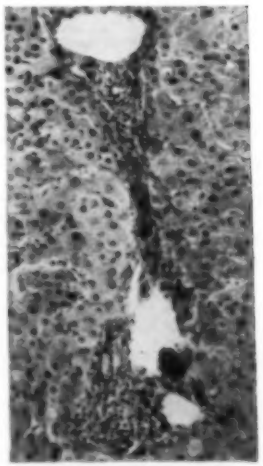


Fig. 6—Section of the liver showing portal tracts linked by connective tissue. H & E × 60.

Fig. 1—Skiagram of the abdomen and pelvis showing foetal skeleton with a doubled up appearance.

Fig. 2—Hysterosalpingogram showing dye in the uterine cavity without evidence of spilling into the peritoneal cavity.

SUR ROY AND ROY CHOUDHURY—*Intraligamentary Secondary Abdominal Pregnancy (pp. 525-28)*

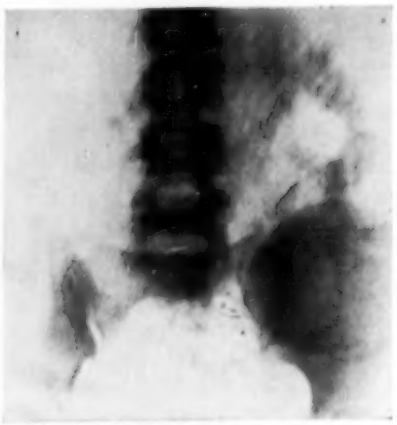


Fig. 1—Skiagram of abdomen showing transverse lie of foetus and positive Spaulding's sign.

SUBHADRA DEVI—*Intra-uterine Death of Foetus followed by Massive Infection of the Uterus (pp. 528-29)*

Fig. 1—The vesical calculus which made its passage spontaneously during micturition.

RAJESWARI AND SHAMANNA—*Spontaneous Passage of a Big Vesical Calculus in a Female (pp. 529-30)*

with coarse granularity, clumping, hyalinisation, eosinophilic necrosis and hazy cellular outlines (Fig. 2, *vide* Plate). Occasionally foci of patchy necrosis infiltrated with inflammatory cells including few polymorphs, eosinophils, lymphocytes and histiocytes were encountered (Fig. 3, *vide* Plate). These foci had no specific distribution in the hepatic lobule.

In 23 cases, there was cytoplasmic rarefaction of varying degree. Out of these, in 12 cases the change was particularly severe, the parenchymal cells being nearly optically empty, the nuclei suspended in the centre of the shell-like cellular outlines by fine cytoplasmic threads (Fig. 4, *vide* Plate).

Periportal cellular infiltration and evidence of early portal fibrosis was seen in 7 cases. In some cases the infiltration was quite heavy. The cells were chiefly mononuclear in type though occasional polymorphonuclear cells were also seen. Portal fibrosis, when severe, tended to extend perilobularly and only rarely encroached into the lobules (Fig. 5, *vide* Plate). Sometimes two portal areas were seen to be linked together by connective tissue bands (Fig. 6, *vide* Plate). There was however, no pseudo-lobulation or proliferation of biliary epithelium. Typical cirrhotic changes were never encountered.

## Discussion

This study brings out the fact that malarial fever, even of a short duration, can bring about a parenchymal damage to the liver of moderate severity. However, we have yet no clue as to the exact mechanism by which this damage is caused. Malarial parasites were not detected in the histological sections in any of the cases. Whether the damage is produced by some kind of toxin, the hyperthermia of the malarial episodes, anaemia or malnutrition, or a combination of the above factors is not known with certainty. The changes morphologically appear to be reversible. Malnutrition being a contributory or conditioning factor cannot be entirely excluded, since the average dietary of the class of patients studied would be low. The cytoplasmic rarefaction noted was in all probability due to protein deficiency.

Proliferation of reticuloendothelial cells has been noted by several workers. Sen Gupta (1943) reported this change in an extreme degree in cases of so-called tropical splenomegaly. In these cases the history of fever was inconstant and other factors known to cause splenomegaly in tropical countries were excluded.

Judging from a sampling of all clinical types of cases, it seems extremely unlikely that the foci of necrosis or periportal fibrosis would result in postnecrotic scarring or Laennec's type of cirrhosis. The use of the term 'Malarial Cirrhosis' is thus deprecated. The reticulo-endotheliosis, diffuse parenchymal damage, foci of necrosis infiltrated by cells and portal cellular infiltration would seem to indicate some inflammatory element.

## Summary

Histological study from liver biopsy material of 34 cases of malaria is presented.

There is no evidence to show that repeated attacks of malaria would produce true hepatic cirrhosis.

## References

Craig, C. F.—The malarial fevers, J. & A. Churchill Ltd., London. 1909.

*Idem*—A manual of parasite protozoa of man. J. B. Lippincott & Co., Philadelphia and London, 1926.

Diaz, G. J.—Quoted by Walters and Waterlow (1954).

Fredrick, M. G. and Hoffbauer, F. W.—*J. A. M. A.*, **128** : 495, 1945.

Hance, H. B.—*Guy's Hosp. Rep.*, **73** : 379, 1938.

Ionesco, D. and Popper, M.—Quoted by Walters and Waterlow (1954).

Macgraith, B.—Pathological processes in malaria and Blackwater fever. Oxford Blackwell Scientific Publications, 1948.

Marchiafava, E. and Bignami, A.—Malaria, Twentieth Century practice of medicine. Morton & Co., 19, Samson Lane, London, 1900.

McGregor, J. A.—Quoted by Walters and Waterlow (1954).

McMohan, A. E., Kelsey, J. E. and Deraup, D. E.—*Arch. Int. Med.*, **93** : 3, 1954.

Nicholls, L.—*J. Trop. Med. & Hyg.*, **16** : 164, 1913.

Sen Gupta, P. C.—*Indian M. Gaz.*, **78** : 371, 1943.

Shortt, H. E. and Cooper, W.—*Tr. Soc. Trop. Med. & Hyg.*, **41** : 427, 1948.

Talliaferro, W. H. and Mulligan, H. W.—*Indian M. Research Memoirs*, **39** : 1, 1937.

Telcharor, L. and Todorowa, M.—*Sonaine des. Hospit. de Paris*, **26** : 2072, 1950.

Tirumurthi, T. S. and Rao, M. V. R.—*Indian J. Pediat.*, **1** : 153, 1934.

Vint, F. W.—*East African M. J.*, **7** : 349, 1931.

Walters, J. H. and Waterlow, J. C.—Fibrosis of the liver in West African children. Medical Research Council—Special report series (No. 283). Her Majesty's stationery office, London, 1954.

# PULMONARY PRESYSTOLIC MURMUR AND ITS CLINICAL SIGNIFICANCE

L. M. SANGHVI, M.R.C.P. (LOND.), D.T.M. & H. (ENG.),

*Physician and Reader in Medicine,*

AND

K. D. GUPTA, M.D.,

*Lecturer in Medicine,*

*S. M. S. Medical College and Hospitals, Jaipur.*

Presence of a diastolic cardiac murmur, whatever may be its character or point of maximum intensity, means the presence of heart disease. Exceptions to this rule are so rare that one must prove that the murmur does not mean heart disease rather than proving that it does. Occurrence of a basal diastolic murmur in pregnancy though known, is so rare that for all practical purposes it may be neglected. Diastolic murmur occurring sometimes in severe anaemia is considered as 'functional', but in fact it is due to the cardiac damage produced by anaemia. Thus the term functional can only mean that there is no disease or defect of the valves.

At times diastolic murmurs indicate damage to certain valves from their location and character, while those valves are in fact not damaged. The Austin Flint murmur in aortic incompetence suggests a mitral stenosis though there is no mitral valve disease, or the aortic diastolic murmur when it is heard only in the so-called secondary aortic area suggests a pulmonary valve damage, which is not really present.

The object of this paper is to report a harsh, crescendo, presystolic murmur which was observed in three cases of aneurysmal dilatation of the pulmonary artery and pulmonic insufficiency, which are reported below.

### Case Reports

*Case 1*—A female, aged 25 years, was admitted to the hospital on 31-8-53, with the complaints of dyspnoea, swelling of the feet and abdomen, and palpitation. A year ago she noticed breathlessness on exertion and palpitation. Six months later she noticed oedema of the feet and distension of the abdomen. For the last one month she cannot lie flat in bed. There was no history of rheumatic fever or arthritis, or of venereal disease.

On admission the patient was found severely orthopnoeic, with slight cyanosis, prominent veins in the neck and generalised oedema with ascites; the liver was enlarged upto the umbilicus; there was no clubbing of the fingers; the respiration was 28 per minute and pulse 120 per minute; blood pressure 90/70 mm. of Hg. and weight 112 pounds. Examination of the heart revealed an expansile heaving pulsation in 2nd and 3rd interspaces to the left of the sternum with a seesaw character of the apical and basal pulsations, apex beat in the 5th left interspace in the mid-axillary line, right border 1" to the right of the sternal margin and dullness at the base extending as far out as 3" from the left sternal margin in the 3rd interspace. Auscultation revealed a loud prolonged systolic murmur at the mitral area; and a loud systolic and a soft blowing early diastolic murmur with accentuation of the 2nd sound, at pulmonary area. There were systolic and diastolic thrills in the pulmonary area. Fluoroscopic examination showed huge aneurysmal dilatation of the pulmonary arterial trunk, large comma shaped branches, hilar dance, congestion of the lung fields and generalised enlargement of the heart, particularly of the right auricle and ventricle.

Laboratory examination revealed a negative Kahn's test, and a negative cervical smear. Trace of albumin and occasional R.B.C. and pus cells were present in the urine. Circulation time from arm to tongue was 20 seconds and venous pressure was 13 cm. of water. E.C.G. showed right axis deviation, and pronounced right ventricular strain.

Therapy consisted of milk diet in the beginning and later on salt poor diet, digoxin by mouth, and injections of mercurial diuretics.

On September 20, her weight was only 84 pounds that is a loss of 28 pounds, there was no cyanosis, no dyspnoea, no oedema, no ascites and the liver was palpable one finger below the costal margin. At this time a loud, harsh, crescendo, presystolic murmur was audible in the 2nd and 3rd spaces to the left of the sternum, accompanied by a thrill and a systolic and an early diastolic murmur, but there was no murmur in the mitral area. Fluoroscopic examination revealed enlarged right ventricle with aneurysmal dilatation of the pulmonary artery and main branches, clear peripheral lung fields and no enlargement of the left auricle.

On January 8, cardiac examination revealed no murmur or thrills either at the mitral or the pulmonary area, but a split 2nd pulmonary sound was present. Fluoroscopy revealed right ventricular enlargement and aneurysmal dilatation of the pulmonary artery. Her liver was palpable one finger below the costal margin and she still became dyspnoeic on severe exertion. She was discharged at this stage.

*Case 2*—A female, aged 22 years, was admitted to the hospital on 30-11-53 with the complaints of dyspnoea on exertion, pain in the right hypochondrium and slight swelling of the feet for the last ten days. She suffered from rheumatic fever and joint pains for nearly four months, six years ago. Since then she used to get breathlessness on severe exertion. One year ago, a month after her delivery, she developed oedema of feet, pain in the right hypochondriac region and dyspnoea, which were relieved by bed rest and milk diet. Since then she is having these attacks off and on, relieved every time with bed rest and milk diet. There was no history of venereal disease. On examination there was pallor of the mucous membranes, no cyanosis or clubbing of the fingers, slight prominence of the cervical veins, slight oedema of the feet, enlargement of the liver 2 fingers

below the costal margin; respiration 20 per minute and blood pressure 90/65 mm. of Hg. Examination of the heart showed prominent pulsation over the precordium, right border 1" outside the right sternal margin, apex beat in the 6th left interspace in the anterior axillary line, dull note at the base extending 3" to the left of the sternal margin in the 3rd space, and systolic and diastolic thrills at the mitral and pulmonary areas. Auscultation revealed systolic, mid-diastolic and presystolic murmurs at the mitral area; and systolic, early diastolic and harsh presystolic murmurs at the pulmonary area with absent second sound. Fluoroscopy revealed convex left upper salient and prominent conus, generalised enlargement of the heart, marked enlargement of left auricle, congestion of lung fields and no hilar pulsations.

Laboratory examination revealed a negative Kahn's test; and moderate anaemia with R.B.C. 2·6 million per c.mm. and Hb. 7 g. per cent. Circulation time was 20 seconds (arm to tongue); venous pressure 11 cm. of water; E.C.G. showed right axis deviation and pronounced right ventricular strain.

Therapy consisted of hematinics, mercurial diuretics and digoxin.

On December 8, examination revealed a clearly visible heaving and prominent pulsation in the 2nd and 3rd left interspaces with a seesaw character of the apical and basal pulsations. There were mid-diastolic and presystolic murmurs and thrill at mitral area. At pulmonary area the presystolic murmur was now very clearly audible, along with an early diastolic murmur. There was no systolic murmur at mitral or pulmonary area. Fluoroscopy revealed an aneurysmal dilatation of the pulmonary artery, instead of the previous left convex salient.

She had now no oedema or dyspnoea but the liver was still palpable one finger below the costal margin. When she was discharged from the hospital in February she still had a palpable liver though her anaemia had greatly improved. Her murmurs persisted at the time of discharge.

*Case 3*—A female, aged 16 years, was admitted to the hospital on 16-1-54 with the complaints of cough, dyspnoea, pain in the right hypochondrium and palpitation for the past 6 months. Six months ago she had fever and swelling of joints. Since that time she has developed palpitation and gets dyspnoeic on exertion. For the last 2 months she is having pain in the right hypochondrium, cough and dyspnoea even at rest. She had rheumatic fever and arthritis 2 years ago.

On examination the patient was orthopnoeic, with moderate cyanosis, prominent neck veins, and oedema of the feet. The liver was enlarged upto the umbilicus. Respiration rate was 20 per minute, and pulse 120. B.P. was 90/70 mm. of Hg.

Examination of the heart revealed expansile pulsation in the 2nd and 3rd interspaces to the left of the sternum, apex beat in the 5th left interspace on the anterior axillary line; the right border 1" to the right of the sternal margin, and the dullness at the base extending 2½" from the left sternal margin in the 3rd space. Auscultation revealed a presystolic and a systolic murmur in the mitral area; a systolic, a soft blowing early diastolic and a presystolic murmur at the pulmonary area, and absence of pulmonary second sound. Fluoroscopy revealed aneurysmal dilatation of the pulmonary artery, generalised enlargement of the heart and marked enlargement of the left auricle.

Laboratory examination revealed a negative Kahn's test, arm to tongue circulation time of 20 seconds and venous pressure of 13 cm. of water. E.C.G. showed right axis deviation and pronounced right ventricular strain.

Therapy consisted of salt free diet, digoxin and mercurial diuretics. With the improvement in the cardiac condition, the presystolic as well as the early diastolic murmur in the pulmonary area became more marked, while the systolic murmur disappeared. She was discharged on March 16, 1954 with the murmurs still present even though she was fairly well compensated, excepting a slightly enlarged liver.

## Discussion

Diastolic murmurs may be audible in the pulmonary area in the following conditions:

1. Pulmonary insufficiency with or without disease or deformity of the valves.
2. Other cardiovascular diseases.
3. Murmurs conducted to pulmonary area.
4. Truly functional murmur of pregnancy.

*Pulmonic insufficiency*—Pulmonic insufficiency due to disease or deformity of the valves occurs in rheumatic fever, bacterial endocarditis or congenital defect of the pulmonic valves. It gives rise to a soft blowing early diastolic murmur.

There are many conditions in which 'functional' insufficiency occurs without any valvular disease or deformity; but in all these conditions there is cardiac damage.

Graham Steell (1888) described a soft blowing early diastolic murmur due to pulmonary regurgitation occurring independently of disease or deformity of the pulmonic valves, as the result of long continued excess of blood pressure in the pulmonary circuit.

Pawinsky (1894) described the same auscultatory phenomenon in cases of mitral stenosis and since then this murmur has been recognised as one of the occasional findings in mitral stenosis and sometimes in chronic pulmonary heart disease, both conditions associated with extreme dilatation of the pulmonary artery and high pulmonic pressure. This murmur is heard during episodes of congestive cardiac failure when due to dilatation of the conus of the right ventricle and the pulmonic ring, there occurs a functional insufficiency.

Sussman *et al* (1943) described what they called a Graham Steell murmur in cases of Lutembacher's syndrome.

An inconstant soft blowing early diastolic murmur due to functional pulmonic insufficiency is described in congenital idiopathic dilatation of the pulmonary artery as well as dilatation associated with other cardiovascular diseases. Diastolic murmur in severe anaemia is also due to functional insufficiency.

*Other cardiovascular diseases*—In aortic insufficiency a soft blowing early diastolic murmur is often heard best and sometimes only in the third interspace to the left of the sternum or what is called secondary aortic area. This murmur is best heard in the sitting posture in deep expiration and the patient bending forward, and is often mistaken for Graham Steell murmur.

A continuous diastolic murmur is heard in cases of patent ductus arteriosus. It is always associated with a much louder systolic murmur.

Diastolic murmur of aortopulmonary septal defect is best heard in 3rd and 4th intercostal spaces on the left side and is accompanied by a loud systolic murmur.

*Conducted murmurs*—Diastolic murmurs of mitral stenosis or the Austin Flint murmur of aortic incompetence though best heard in mitral area may be conducted upwards and be audible in the pulmonary area. These murmurs are typically mid-diastolic or presystolic and rumbling in character. Murmur of aortic insufficiency even when best heard in aortic area may be conducted to the pulmonary area.

Rarely a diastolic murmur is heard at the base of the heart in pregnancy. This is a truly functional murmur in the sense that it is not due to any cardiovascular disease.

In the cases reported above, the character and the time of the murmur is entirely different from all these above murmurs. All the three patients showed the presence of a loud harsh, presystolic murmur with a crescendo character ending in the first heart sound and localised in the 2nd and 3rd intercostal spaces to the left of the sternum. This murmur was always accompanied by the soft early diastolic murmur of pulmonary insufficiency. In the first case the insufficiency was functional and with improvement of the cardiac failure, both the diastolic as well as presystolic murmurs became inaudible. But in the other two cases of rheumatic valvular damage and insufficiency, both these murmurs became more marked, with improvement in cardiac condition. The presystolic murmur was thus heard only in the presence of pulmonic insufficiency. All the three cases had aneurysmal dilatation of the pulmonary artery. We have not been able to find any mention of such a murmur in cases of pulmonary insufficiency or simple pulmonary artery dilatation. It, therefore, appears to us that such a presystolic murmur when associated with the early diastolic murmur of pulmonary insufficiency is diagnostic of the presence of an aneurysmal dilatation of the pulmonary artery.

In Case 1 the diagnosis of interatrial septal defect was considered to be unlikely because of the absence of a prominent basal systolic murmur which is one of the traditional diagnostic criteria for interatrial septal defect (Chapman and Fraser, 1953). This murmur has been reported to be absent in only exceptional cases when the haemodynamics in the pulmonary vessels have not altered considerably. In this case though a pulmonary systolic murmur was present at the time of admission yet it disappeared later when the patient improved.

In Cases 2 and 3 also, the basal systolic murmur disappeared with improvement. Chapman and Fraser (1953) and Nadas and Alimurung (1952) described apical diastolic murmurs in cases of atrial septal defect. In every case however the traditional systolic murmur was present in the pulmonary area or along the sternal border. In our cases presence of apical diastolic murmurs and thrills in the absence of this systolic murmur at the base speaks strongly against the possibility of atrial septal defect or Lutembacher's syndrome. Again in our cases there was marked enlargement of the left auricle while in Lutembacher's syndrome it is usually normal or only slightly enlarged (Schnitker, 1952). Absence of prominent hilar pulsations or hilar dance in our cases is also another point against Lutembacher's syndrome.

It may be mentioned that we have omitted much discussion on the diagnosis of the cases because our intention in the paper has been mainly to deal with a presystolic murmur whose origin we ascribe to an aneurysmal dilatation of the pulmonary artery and pulmonic insufficiency irrespective of the aetiology.

## Summary

1. Three cases with aneurysmal dilatation of the pulmonary artery and pulmonic insufficiency which showed presence of a localised, loud, harsh, crescendo, presystolic murmur in the pulmonary area accompanied by a presystolic thrill are reported.

2. A short classification of pulmonary diastolic murmurs with their characteristics is given.

3. It is suggested that the presystolic murmur when accompanied by an early diastolic murmur of pulmonic insufficiency is diagnostic of the presence of aneurysmal dilatation of the pulmonary artery.

ACKNOWLEDGMENTS

Our thanks are due to Dr. R. M. Kasliwal, Superintendent, S. M. S. Hospital, for permission to publish the records and to Drs. Rameshwar Sharma, and M. N. Mathur for their help in preparing the case reports.

REFERENCES

CHAPMAN, C. B., AND FRASER, R.—*Am. Heart J.*, **46** : 352, 1953.

NADAS, A. S. AND ALIMURUNG, M. M.—*Ibid*, **43** : 601, 1952.

PAWINSKY, J.—*Deut. Arch. Klin. Med.*, **52** : 519, 1894.

SCHNITKER, M. A.—Congenital Anomalies of the Heart and Great Vessels, Oxford University Press, New York, 1952, p. 179.

STEELL, G.—*Med. Chron.*, **9** : 182, 1888.

SUSSMANN, M. L., GIRISHMAN, A. AND STERNBERG, M. F.—*Am. J. Dis. Child.*, **65** : 922, 1943.

*REFRESHER COURSE*

# ECZEMA

B. N. BANERJEE, M.B. (CAL.), M.R.C.P. (EDIN.),

*Professor of Medicine (Skin),*
*Calcutta Medical College.*

Eczema is the most perplexing term in dermatology. It is a group of sigus due to the inflammatory reactions of the skin (heat, redness, oedema and itchiness or pain). Clinically a patch of eczema begins as an erythema followed by the formation of tiny papules, later changing into vesicles and ultimately drying up with crust formation. When healed, it desquamates in the form of scales. Eczema is therefore a composite picture of erythema, papules, vesicles, crusts or scales. This picture may vary according to the acuteness of the condition or to the nature of toxins responsible for it.

## CLASSIFICATION

Eczema may be classified according to its clinical features, i.e., types of eruptions as erythematous, papular, vesicular and pustular or combination of them.

*Erythematous*—The lesions are usually ill-defined with little oedema. Patients complain of itching and sensation of heat. Erythema slowly disappears with fine scaly desquamation. This may pass into acute vesicular, pustular or dry scaly form.

*Papular*—Here the lesions are red coloured pin head papules, arranged in groups forming patches or they remain discrete. This variety is very itchy and shows thickening and excoriations as a result of scratching.

*Vesicular*—It often starts acutely. Vesicles appear on small erythematous points. Vesicles may be seen very closely set and often coalesce to form large lesions. When vesicles rupture, itching stops and scales and crusts form over it, due to drying of exudates ; it may occur in any part of the body. Lesions are very irritating and are shown by the presence of scratch marks and areas of bleeding.

*Scaly*—This type is often seen in the later stages of erythematous or vesicular eczema. It is always seen in chronic condition of the disease.

## AETIOLOGY

The aetiological factors are :

(1) Physical (e.g., heat, cold, sunrays, etc.)
(2) Chemical
(3) Microbial (fungal, bacterial, viruses)
(4) Toxic—Internal —Known —Metabolic
External—Unknown—Microbial
(5) Psychosomatic.

Eczema due to physical causes is quite familiar to the general practitioners. Chemical eczema is the result either of hypersensitivity of the epidermis to or the irritant action of substance on the tissue. This type of eczema in acute form is characterised by bright red colouration with closely set superficial vesicles of varying sizes. Subcutaneous oedema is marked and quickly gives rise to a weeping condition. Eczematous condition usually develops within twelve hours from the time of contact with specific allergens but in many cases it may develop a long time afterwards. Commonly it develops at the site of contact with allergens but it may develop in different parts of the body, too, due to generalised sensitisation of tissues. A large proportion of industrial dermatitis falls in this group of eczema. The disease may be due to specific hypersensitivity to allergens, or to contact with detergents or such things as are often used for cleansing purposes, or due to contacts with dust in the works.

Eczema due to toxins or of any other unknown or doubtful origin is known as atopic dermatitis. In certain types of eczemas a relation is found with other diseases, e.g., eczema, a flare-up of the one often brings relief or improvement of the other. In many such cases histories will be present in the family. There are three stages of this disease :

(*a*) An infantile stage or infantile eczema as it is commonly called usually starts at the 2nd or 3rd month of life and persists upto the second year. The infant develops erythematous eruptions, more often starting on the cheek, spreading to the

neck, upper and lower extremities. In fact, it may spread and cover the whole body. Skin lesions are vesicular with encrusted or erythematous surface.

(*b*) The second stage or eczema of childhood or Besnier's prurigo. This is the condition when papular lichnified lesions affect the flexors of the knees, elbows and face. They are very itchy and asthma is often found associated with it. This phase may follow the first phase (infantile eczema) without interruption or it may start several years afterwards. It commonly disappears at the onset of puberty. In many cases, this phase may last into the adolescent or adult phase with interruption. It is very distressing on account of its itchiness and is invariably accompanied with bouts of such condition at night along with asthmatic attacks.

(*c*) The third phase is known as eczema of adolescents or adults and is designated by such names as neurodermatitis, lichen simplex chronicus, flexoral dermatitis and internal toxic dermatitis, etc. The lesions are papules forming lichnified areas which are usually dry. The older the lesion the more is the thickening. Its borders are not very sharply defined and the colour varies from bright red to black. The course of the disease is erratic, often exacerbations taking place with the formation of fresh papular lesions at the periphery. Usually they are itchy lesions and as the result of scratch injuries secondary infections follow. Spontaneous remissions or cures are seen. Distribution is characteristic. Affected parts are the flexures of the elbow and knee joints, front and sides of the neck. Other sites are the scalp, forehead, eye lids, cheek, wrists, dorsum of the fingers and toes, legs and dorsum of the feet.

The term atopy truly signifies the condition where familial tendency or hereditary factors are noted. In many cases particularly in the tropics, such conditions and manifestations are seen in cases where generally no such history could be elicited. They are found commonly due to endogenous toxins. Enterocolitis and hepatitis are very common ailments in the tropics and they are found as the causes of eczemas and they too are designated as atopic eczemas. The exact mechanism of these diseases is not very clear. The toxins produced by bacterial toxins or metabolic defects or a combination of both may be causative factors. Such toxins sensitise the cells of the epidermis and produce eczema. Individuals showing atopic nature probably become more easily sensitised to the action of toxins. In many cases a seborrhoeic condition (particularly greasy and oily skin) is found prominently manifested along with eczema. Metabolic defects particularly of fats are found in such cases. Microbial eczema is a common variety and the best examples are seen in children as streptococcal eczema of the ear. Eczema due to fungi infections are quite common and seen particularly in seasons when humidity is very high.

Psychosomatic eczema is still a controversial subject. Flushing and blanching are quite frequently emotional in origin, and may cause or precipitate itchiness and exudation as a result of rubbing or scratching. An emotional state may cause excessive sweating which also aggravates the eczematous lesions.

## Diagnosis

*History*—The history of the case needs very careful attention. It alone will help in the majority of cases in arriving at a conclusion. A familial tendency, presence of asthma, etc. will be quite frequently noted in the atopic variety. Similarly, history of contact with irritant materials will be found in contact types. A history of chronic suffering from enterocolitis will be given by those suspected to be suffering from endogenous toxicity. Lastly, a history of idiosyncrasy in the choice of food may be present in many cases.

*Appearance and site*—Highly inflammatory condition with or without exudation are commonly found in contact eczemas. They occur at the sites of contact with irritant substances.

Chronic lesions in some particular sites such as the dorsum of the feet, flexures of elbows and knees, neck, etc., will be helpful in diagnosing atopic or endogenous eczemas. Similarly, vesicular lesions on palms and soles will denote a toxic variety of endogenous or exogenous origin.

*Specific investigations*—(i) Elimination one by one of food materials of diet, (ii) avoidance of contact with dust, plants, etc., (iii) patch tests with suspected materials, (iv) examination for fungus in lesions, and (v) search for septic foci.

Eosinophilia in the atopic variety will be found fluctuating almost every day. In acute varieties of contact eczema it is not usually found to increase. It is found moderately increased in the endogenous variety. A moderate degree of anaemia and dyspepsia is commonly found in women suffering from the disease.

## Complications

The commonest complication is secondary infection with bacteria or fungi.

## Prognosis

Eczema can generally be cured but there always remains the possibility of recurrence at the same site or in other parts of body. Susceptible individuals often get it back when they come in contact

HOECHST

*introduces*

# CARNIGEN

A CIRCULATORY STIMULANT IN TUNE WITH THE LATEST ADVANCES IN THERAPY

**ACTION**

**TONES UP THE VENOUS PART OF THE CIRCULATORY SYSTEM**

**IMPROVES CARDIAC EFFICIENCY**

**COMPOSITION**

**CARNIGEN** is a rac-p-hydroxyphenylmethylamino-propanol hydrochloride in a mammalian organ extract containing nucleosides with standardised adenosine content

**INDICATIONS**

- ★ **Functional cardiovascular disorders**
- ★ **Hypotension following infections and operations**
- ★ **Peripheral circulatory failure**
- ★ **Postural hypotension**
- ★ **Functional coronary insufficiency**
- ★ **Collapse**

**PACKINGS**

DROPS: Bottles of 20 cc. • AMPOULES: Boxes of 5 x 2 cc.

*Fully effective in oral administration!*

*Full particulars from*

Sole Importers:

**FEDCO LIMITED**

Kasturi Buildings,
Churchgate Reclamation, Bombay 1.

Distributors:

**PHARMA TRADING CO. LTD.,**
3, 4, 5, Lindsay Street,
CALCUTTA 16.

**INDO AGENCIES (PHARMA) LTD.,**
67, Dr. Alagappa Ch. Road,
MADRAS 7.

# Diamine Penicillin

## in Venereal Diseases

DIAMINE PENICILLIN preparations are **musts** in the treatment of Venereal Diseases. Their prolonged effect is fatal to Syphilis in all its forms, while the additional initial and intermediate high concentrations available with the **fortified** version are equally deadly against Gonorrhoea.

*DIAMINE PENICILLIN is available in a range of 3 forms:—*

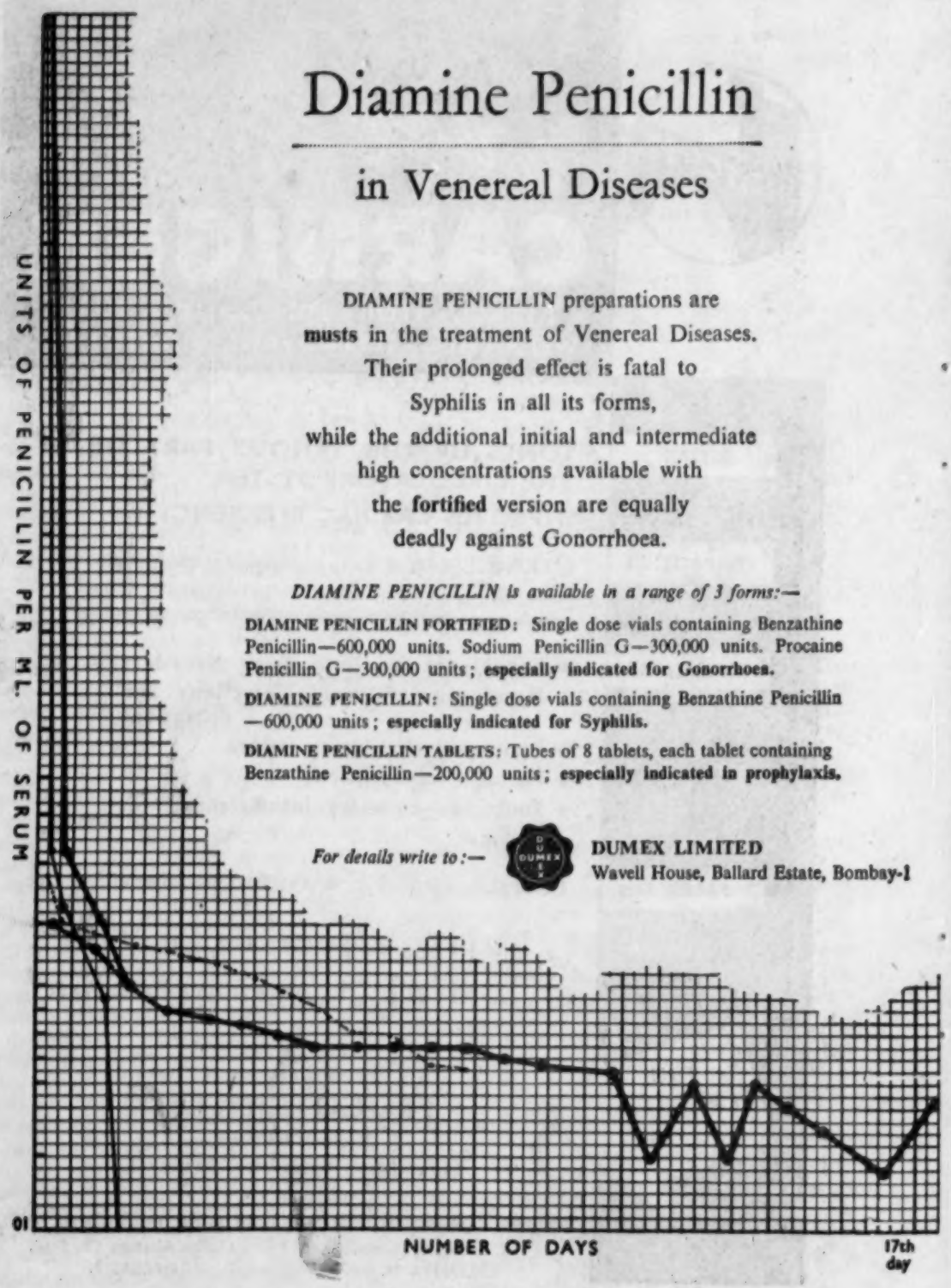
**DIAMINE PENICILLIN FORTIFIED:** Single dose vials containing Benzathine Penicillin—600,000 units. Sodium Penicillin G—300,000 units. Procaine Penicillin G—300,000 units; **especially indicated for Gonorrhoea.**

**DIAMINE PENICILLIN:** Single dose vials containing Benzathine Penicillin —600,000 units; **especially indicated for Syphilis.**

**DIAMINE PENICILLIN TABLETS:** Tubes of 8 tablets, each tablet containing Benzathine Penicillin—200,000 units; **especially indicated in prophylaxis.**

*For details write to:—*

**DUMEX LIMITED**
Wavell House, Ballard Estate, Bombay-1



with similar state of things. In cases showing relation of skin with lungs or other organs, care should be taken not to clear the skin fully but try to adjust the state in such a way that the individual remains comfortable.

## Treatment

A general principle of treatment is described. Individual cases may require alterations and adjustments according to the condition and stage of the disease.

*Preventive*—Whenever known causes are present, the first duty will be to see that the same factors are avoided. In these days of industrial development, many cases are to be found developing eczematous conditions of the skin due to contact with various kinds of oils, paints, fumes, etc. Many become sensitive to the dust in the factory.

*Systemic*—Rest, both physical and mental, particularly in acute cases, is indispensible. Bowels to be kept open, where required purgatives may be given and repeated saline aperients are more useful.

In acute cases and in cases with systemic troubles, the diet should be liquid in nature. Drinks in the nature of simple water, sugar water with lime juice, soda water, barley water, etc. should be given in enough quantity. Alcohol, spicy and fatty foods in general should be avoided. So also the kinds of food we often know as allergy-producing such as shrimps, lobsters, crabs, eggs, and some kinds of pulses, should not be taken.

As drugs sedatives and hypnotics are indicated wherever there is disturbance of sleep due to itching. Real relief in an itchy condition cannot be given by medicinal therapy. It is suppressed and subsides when the disease itself is checked by treatment. Barbiturates and bromides are the drugs commonly used. Milder cases react well to bromides or antihistaminics. In bad cases where they fail, use of pethidine or even morphine may be required to procure proper rest and relief from itching. Antihistaminics are quite frequently used orally and parenterally to control the disease. Because of the hypnotic effect, they are not always suitable for ambulatory cases. In chronic cases antihistaminics have practically no use. Other drugs which are used as general agents are calcium, vitamins C and B complex. A combination of calcium and antihistaminics which may be used parenterally for quick results or orally is better. Injectable antihistaminics, alone or in combination with calcium, are found very effective in general and may be used safely in all types of cases. Other detoxicating drugs are 10 per cent sodium thiosulphate, vitamin C (500-1000 mg.). Autoblood (2-10 c.c.) every 5th day—8 to 10 such injections may produce good results. Lastly, in very acute localised or generalised eczemas, adrenocorticotropic hormone or cortical hormone parenterally, orally and also by local application, controls the condition very quickly. It does not cure the disease and the effect is temporary.

*Psychotherapy*—Eczemas, particularly, in exposed parts of the body may cause mental stress of various degrees, more so when it is regarded as an incurable or infectious disease. Some also fear disfigurement. They become quite conscious of others' adverse opinion concerning the disease in him or her. Due consideration is to be given to these thoughts, otherwise it may lead to chronic psychotic condition and hamper cure. So whatever may be the stage or condition of the disease, the patient needs assurance of cure, non-infectivity, etc.

*Topical therapy*—It needs careful selection of drugs. The disease in different stages will require different types of medication.

For cleansing in chronic cases of eczema in dry or moist state, hot or cold compress is very helpful. In cases having too much itchiness, alternative hot and cold compress often gives antipruritic effect. In the acute inflammatory and exudating state the following measures are indicated: (*a*) Rest to the part; (*b*) hot or cold compress; (*c*) dabbing on the surface ⅓ to 1 per cent silver nitrate solution or 10 per cent calcium gluconate solution or 4 per cent aluminium acetate solution; (*d*) covering the parts with starch poultice to be changed every 6 to 8 hours†; (*e*) when microbial infections are present, after compress dab the parts with 2 per cent gentian violet solution and keep the parts uncovered.

In sub-acute stages where it is less moist, lotions containing antipruritic drugs are to be applied after proper cleansing. Usually calamine lotion with 1 to 3 per cent phenol, menthol and thymol ½ to 1 per cent are used. Some cases may require addition of anaesthetic drugs as procaine or novocaine (1 to 2 per cent). It should be given with caution as the patient may show sensitiveness to the drugs. Liq. plumbi subacetatis fortis and liq. carbonis detergens equal parts (5 per cent) with water added upto 100 per cent are useful. It allays irritation and itching.

† 4 tablespoonfuls of starch powder and one to two teaspoonfuls of boric acid powder are put in a pot. Pour cold water and make a paste. Then boil a pint of water in a sauce pan. When boiled take the pan out of fire and pour the paste into it and stir well till it becomes clear and jelly-like. Allow it to cool when a thick jelly-like substance will be formed. Put it in between the folds of clean linen in the form of bandage and wrap the affected part with the same. Starch paste so formed may be kept in a cool place for future use till the quantity is used up.

When the condition becomes chronic, ointments containing drugs having reducing, keratolytic and tissue stimulating properties are to be used. Such drugs are salicylic acid, pyrogallic acid, tar preparations, resorcin, ichthyol etc. They may be used singly or in combination. Common ointments which are used are 3 per cent acid salicylic with 6 per cent liq. carbonis detergens in paraffin, vaseline or eucerinum. Percentages are to be adjusted according to the age of the patient. Children require much weaker strengths. To the ointment, resorcin, ichthyol, may be added in 1-2 per cent strength. Where mild infections are present, mercury may be added in 1-2 per cent strength. The use of antihistaminics is very limited. Excepting in cases of acute allergy with pruritus, oral medications of such drugs are of very little use. Topical application only gives a soothing effect because of its anaesthetic properties.

*Radiation therapy*—It is indicated in chronic intractable cases.

In conclusion, I feel it will not be out of place to give a few hints about the management of atopic eczema where intestinal troubles are thought to be the cause. In infants particular care is to be taken in suggesting diet. Artificial milk in place of cow's or breast milk often controls the disease quickly. In children change of diet, regular clearance of bowels and vitamins orally are helpful.

*SPECIAL ARTICLES*

## THE MECHANISM OF HEART FAILURE

SUNITA I. SINGH, M.D.

AND

INDERJIT SINGH, PH.D. (CANTAB.), M.B.B.S. (RANGOON), L.R.C.P. (LOND.), M.R.C.S. (ENG.), F.A.SC., F.N.I.

*From the Department of Physiology, Medical College, Agra.*

To understand the mechanism of heart failure, the mechanism of the normal contraction of muscle must be known. In the present paper are summarised experiments which elucidate the intimate nature of muscular contraction, and their bearing on the responses of the failing heart; these experiments have been published elsewhere (Singh and Singh, 1954 a, b, c.; 1955 a, b, c).

Muscle responds by contraction or relaxation when it is stimulated, the response being produced through the mediation of the excitatory system. The type of response will also be conditioned by the properties of the contractile system. Though the excitatory system may be responsive, the contractile system may not be 'excitable'; the contractile system may be unable to contract or relax, though the excitatory system may be functioning 'normally'. To know the behaviour of the contractile system in a response, it is therefore necessary to exclude the excitatory system.

The contractile mechanism of unstriated muscle has been studied by two methods (Singh and Singh, 1949, 1950, 1951, 1954 a, b, c). In the first method, the muscle is allowed to die in the experimental solution, which is not oxygenated. It is well known that the normal permeability of muscle depends upon metabolism, so that as the muscle dies, it becomes inexcitable as well as fully permeable to various substances; the excitatory system then ceases to function and the contractile system acts without interference. In the second method the muscle is killed by heat by raising the temperature to 50°C. for 10 minutes. Most of the results obtained by the former method have been substantiated by the latter method.

Substances such as acids, bases, amides, urea and heat, which denature proteins, cause active relaxation of dying and heat killed unstriated muscle; by active relaxation of dead muscle is implied that it relaxes without the application of an external force. The criteria for active relaxation of living muscle are many more (Singh and Singh, 1952). According to modern theory, denaturation consists of an alteration of the specific internal structure of the protein wherein the closely folded peptide chains unfold (Haurowitz, 1950). Similarly, the contraction of muscle is supposed to be due to folding of the contractile protein, so relaxation would be due to unfolding of the muscle proteins. So far no unequivocal evidence of chain folding in the contracted state of muscle has been produced. The above experiments on denaturation of muscle demonstrate folding of polypeptide chains indirectly. Other experiments on unstriated muscle also suggest that contraction is due to a globular transformation of the contractile protein (Singh and Singh, 1951).

A difference between the dying and the heat killed muscle is that the latter has lost the power of contraction by many substances which make the former contract. In denatured protein, the bonds which hold the polypeptide chain and normally prevent their unfolding are presumed to be ruptured. It therefore appears that the intermolecular and intramolecular bridges between the folding polypeptide chains are necessary for contraction. This view is supported by experiments which show that the heat killed muscle can be made to contract by some agencies that cause coagulation of proteins. During coagulation it is presumed that the

old bonds which had been ruptured by denaturation are replaced by new ones (Haurwitz, 1950). The process of contraction is therefore similar to that of coagulation of proteins, the similarity being in the development of cross linkages in both. The contraction of dead muscle can therefore be studied by making it contract by some protein coagulants, and the responses of the contractile mechanism are thus elucidated.

In these experiments, the heat killed muscle was made to contract by two methods:

1. By strong hydrochloric acid solutions. In this method, a piece of muscle can be used only once, so that to study consecutive response, almost identical pieces of muscle have to be prepared. The results obtained are quite uniform by this procedure. With heart muscle, it was not possible to prepare strips containing longitudinal fibres, so rings of ventricular muscle were cut out from dog's heart, and oblong pieces prepared ; these gave good contractions. The tension produced depends upon two factors: (*a*) strength of hydrochloric acid (*b*) Initial length ; up to a certain extent, the muscle responds with greater tension, the greater the initial length. If the muscle is stretched too far, the tension diminishes.

Strong hydrochloric acid solutions can hardly be considered as physiological stimuli to the contractile mechanism of muscle, yet the effects produced by them on dead unstriated muscle resemble the responses of living muscle so closely, that a close relationship is suggested between the effects of the acid and those that occur normally. The normal contractile response therefore, resembles coagulation of proteins, this resemblance presumably existing in the formation of cross linkages between the polypeptide chains in both (Singh and Singh, 1954, b, c). The effects of hydrochloric acid suggest that normally as a result of excitation, a chemical substance, presumably adenosinetriphosphate, is liberated to act on the contractile mechanism.

2. By increase of temperature. If a piece of unstriated muscle, which had been killed by heating to 50°C. is one heated to 70°C. and then brought back to room temperature (20°C), then any further increase of temperature causes a proportionate contraction which is perfectly reversible. Thus the response of the contractile mechanism can also be studied by this method, which has the advantage over the previous one, that consecutive observations can be made on the same piece of muscle. In striated muscle, the heat contraction is not reversible, and in cardiac and some unstriated muscles, it is partially reversible ; this results in a partial tonic contraction, on which reversible contractions can be superimposed, and thus responses of the contractile mechanism can be studied.

As with the response to hydrochloric acid, the tension produced is determined by two factors: (*a*) Increase of temperature ; (*b*) Initial length. In cardiac muscle, differences in the contraction produced by change in initial length are much less than in unstriated muscle, but definite. They are best given by pieces from the right ventricle of the dog's heart ; the whole of the frog's heart can be used (Fig. 1). The basis of Starling's law of the heart, therefore involves some change in the contractile proteins.

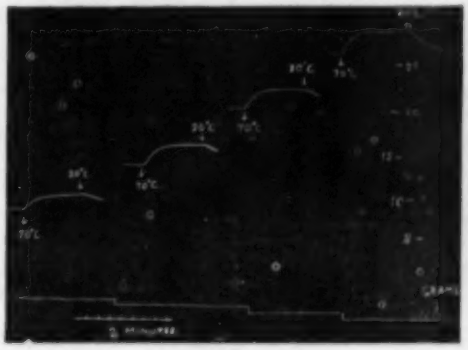


FIG. 1—FROG'S HEART (*Rana tigrina*) KILLED BY HEATING TO 50°C. FOR 10 MINUTES. EFFECT OF INITIAL LENGTH ON THE RESPONSE TO INCREASE OF TEMPERATURE. LENGTH INCREASED BY 3-4 PER CENT EACH TIME. THE LAST CONTRACTION IS DOUBLE THE FIRST.

Ultimately all attractions and repulsions must be electrical in nature ; in an electrical system also the strength of such forces depend upon two factors, the strength of the electrical poles and the distance between them. In muscular contraction, the effect of initial length on the response of the contractile mechanism, suggests that distances are involved, and the strength of the chemical or physical agent acting on the contractile mechanism presumably changes the pole strength.

Stretching the muscle in some way appears to diminish the distance between the poles. A scheme is suggested (Fig. 2). It may be presumed that points of attraction are located on parts of the folded polypeptide chains ; these parts are represented diagrammatically as oblique lines. At the end of each line are two points of attraction, the direction of the attractive force being indicated by the arrows. When the muscle is stretched, two things happen. First, these lines are straightened out, so that they rotate at their centre, and bring the terminal points of attraction nearer. Secondly, this effect may be counterbalanced by increase in

FIG. 2—SCHEMATIC REPRESENTATION OF THE EFFECT OF INCREASE IN LENGTH ON TENSION.
1—Representation at a certain length; 2—Effect of stretching so that the points of attraction come nearer; 3—Effect of further stretching so that the points of attraction move further apart.

the distance between individual lines as a whole, so that the result will depend upon the net effect of these two opposing factors.

The heart may thus fail, if there is diminution of the pole strength; this may happen if there is lack of nutritive substances, oxygen or other factors concerned in the liberation of energy for contraction. The heart may also fail if its fibres are overstretched. A correction of the former factor is usually attempted in heart failure. Correction of the second factor would require a substance that will modify the molecular pattern of the contractile proteins in some way, so as to diminish the distances concerned. It is possible that this is corrected naturally by the process of hypertrophy.

### REFERENCES

HAUROWITZ, F.—Chemistry and Biology of Proteins, Academic Press, New York, 1950, p. 125.
SINGH, S. I. AND SINGH, I.—*Proc. Indian Acad. Sci.*, **30**: 270, 1949.
*Idem—Ibid*, **32**: 12, 1950.
*Idem—Ibid*, **33**: 165, 1951.
*Idem—Curr. Sci.*, **21**: 283, 1952.
*Idem—Ibid*, **23**: 126, 1954a.
*Idem—Ibid*, **40**: 125, 1954b.
*Idem—Ibid*, **40**: 145, 1954c.
*Idem—Ibid*, 1955a (In the press).
*Idem—Ibid*, 1955b (In the press).
*Idem—Ibid*, 1955c (In the press).

# NEO-CARDIOLOGY †

## Modern Approach to Cardiovascular Problems

RUSTOM JAL VAKIL, M.D. (LOND.), M.R.C.P. (LOND.), D.T.M. & H. (LOND.), F.R.F.P.S., F.C.P.S., F.A.SC., F.R.C.S.,

*Hony. Physician, King Edward Memorial Hospital and Lecturer in Medicine, G. S. Medical College, Bombay.*

### ITS EVOLUTION

In the historical evolution of our present-day concept of cardiovascular disease, one can discern several distinct epochs or phases.

The first and longest phase of all (primitive cardiology), began many centuries before Christ, in the ancient land of Egypt, round about 3000 B.C. and continued right upto the discovery of percussion by Auenbruger and of auscultation by Laennec; during this long phase of well over forty centuries, cardiology had concerned itself mainly with the study of the pulse and peripheral manifestations of cardiac activity.

During the second phase (clinical or scientific cardiology), the main emphasis was on a thorough clinical examination of the patient, innumerable symptoms and signs of heart disease being described and studied.

With the dawn of the present century one observes such a radical change in the face of cardiology, that a completely new science (which may conveniently be referred to as neo-cardiology or modern cardiology) may be said to have emerged.

### A RADICAL CHANGE IN OUTLOOK

In the evolution of modern cardiology, one discerns a complete change of outlook or approach on the part of the medical profession towards diseases of the cardiovascular system. Instead of the clinical approach of the last century, there is a radical change towards a therapeutic approach.

---

† Paper read at the Second Annual Territorial Conference, of the Indian Medical Association, Bombay, 1955.

Instead of a diligent search and study for more and more signs and symptoms of heart disease there is an evergrowing tendency today towards instituting and implementing ways and means of combating the cardiac menace.

Modern cardiology may be said to be mainly directed towards reducing the high toll of life and loss of useful manpower claimed by diseases of the cardiovascular system.

### Factors Responsible for Metamorphosis

This sudden change in outlook or approach towards cardiovascular problems in the last few decades is attributable, in my opinion, to the following main factors, viz.,

(1) The appreciation by the medical profession of the high incidence or prevalence of diseases of the cardiovascular system. Diseases of the heart and blood vessels have come to constitute the major problem of the day, especially in western countries, not only from the clinical and scientific, but also from the public health and socio-economic points of view. They constitute the leading cause of death and disease in most civilized countries, surpassing in their toll of life even the dreaded trio of tuberculosis, cancer and pneumonia. The enormity of the heart problem becomes obvious when one realizes that in the U.S.A., one out of every two deaths reported is due either directly or indirectly to diseases of the circulatory system.

(2) The growing menace of heart disease, as revealed by recent statistical studies. A problem that is increasingly engaging the minds of statisticians and public health authorities alike, is the steady rise, from year to year, in the incidence and death rate of diseases of the cardiovascular system. Part of this reported increase may be due to the greater familiarity or awareness on the part of the present day physician with the clinical picture of heart disease. Another reason of greater importance is the steady decline in the death rate of infectious diseases and fevers in youthful subjects, resulting in a larger number of middle aged and elderly subjects in the population ; the average span of life today being longer, thanks to the introduction of antibiotics and new methods of sanitation, it is but natural that the degenerative and senescent forms of heart disease, like coronary disease, should show an increased incidence. In the words of John King, 'increasingly we are escaping fatal infections and dying of normal senescent debilities of the circulatory system'. Quite apart from these two reasons, it is the belief of most authorities on the subject that there has been recently a genuine increase in the incidence of cardiovascular diseases and particularly so in the case of male subjects. For instance, in the U.S.A., the death rate of individuals between the ages of 35 and 65 years, in the short span of 27 years between 1920 and 1947, has exactly doubled in the case of males, remaining stationary in the case of females ; this sex discrepancy is moreover confined only to cases of heart and kidney disease.

(3) Participation of blood vessels in the causation of cardiovascular disease. In the past, the heart was the only part of this system with which the public was concerned. Recent work proves that diseases of the blood vessels are even more important in the causation of death and disease than the heart itself. Of every 10 deaths from so-called heart disease reported in the U.S.A., 9 are due to diseases of the blood vessels rather than heart. Comparing the circulatory system, to a hydrodynamic system, one may say that the circulating 'pipes' (or blood vessels) cause a breakdown in the system nine times as often as the central 'pump' (or heart) itself.

(4) The discovery of the instrumental aids to diagnosis, viz., the polygraph, electrocardiograph and radiograph, later to be reinforced by a host of newer innovations like the cardiac catheter, ballistocardiograph and vectorocardiograph.

### Sectional Classification of Neo-Cardiology

Modern cardiology or neo-cardiology is much too vast and complex a subject to tackle in the space of few minutes. Of the various recent advances in our knowledge of heart disease, the following are perhaps the most notable, viz., (1) Therapeutic advances. (2) Improved methods of diagnosis. (3) Instrumental cardiology. (4) Prophylactic or preventive cardiology. (5) Occupational cardiology or rehabilitation of cardiac cases. (6) Cardiovascular surgery. (7) Resuscitation of the dead. (8) Public health measures.

### Therapeutic Advances

Of the innumerable therapeutic innovations introduced within the past few years in the treatment of cardiovascular disorders, the following are perhaps the most noteworthy, viz., (1) The successful employment of antibiotics like penicillin in the treatment of bacterial endocarditis and cardiovascular syphilis ; by the introduction of this measure alone the mortality rate of subacute bacterial endocarditis has been brought down from 99 per cent to about 15 per cent. (2) The use of anticoagulant therapy in cases of coronary thrombosis and allied conditions ; this has led to a striking reduction in the incidence of thromboembolic complications and an appreciable lowering of the mortality rate (from about 24 per cent to

15 per cent). (3) Improved methods of treatment in hypertensive cases, including potent hypotensive agents like hexamethonium, veratrum alkaloids and hydralazine; *Rauwolfia serpentina*, indigenously used in India for centuries, has also been universally acclaimed as a useful hypotensive remedy within the past few years. (4) Cortisone and ACTH have been used with success in some cases of rheumatic fever.

### Diagnostic Innovations

In order to facilitate the early diagnosis and treatment of various cardiovascular ailments, numerous tests or diagnostic aids have been evolved and successfully employed during the last few years. For instance, the anoxaemia or hypoxaemia test of Levy, and the exercise tests of Master and others have served to demonstrate the existence of coronary disease long before the actual development of symptoms and signs. Detection of a hypertensive tendency in the so-called pre-symptomatic phase has been made possible in some cases by resort to the pressor test of Hines.

### Instrumental Cardiology

With the discovery of instrumental aids to diagnosis, prognosis and treatment the whole subject of cardiology has been revolutionized within the past few decades. With the aid of the polygraph and electrocardiograph the complex arrhythmias of the heart were explained for the first time. Innumerable techniques involving the electrocardiograph have been elaborated with a view to facilitate early diagnosis, and localization of lesions in coronary cases. Cardiac catheterization and angiocardiography have unravelled to a great extent the mysteries of the 'congenital heart'. Instrumental methods of diagnosis have multiplied to such an extent that in a recent review of the literature, I was able to collect 37 different methods of instrumental diagnosis advocated from time to time.

In the past few decades, wave after wave of unbriddled enthusiasm has swept the profession with the discovery of each new instrument of precision. This has been particularly so in the case of the electrocardiograph and fluoroscope.

### Prophylactic or Preventive Cardiology

As in the case of infectious diseases, more and more time and energy are being devoted to the preventive aspects of heart disease. Thanks to improved methods of sanitation and hygiene, prevention of damp surroundings and over-crowding and the timely employment of antibiotics, prevention of rheumatic fever or rheumatic heart disease has become a practical reality. By the early eradication of septic foci and surgical correction of congenital cardiac defects, the ultimate development of bacterial endocarditis has been averted in many a case. Similarly, by the prompt institution of antisyphilitic treatment in the early phases of the disease, syphilitic heart disease has not been allowed to develop at all in many cases.

The following measures have been recently advocated with a view to avert or delay the serious coronary and arteriosclerotic complications of advancing age, viz., (1) Reduction of body-weight by dieting, (2) restriction of fats and cholesterol in the diet, (3) the administration of lipotropic agents like choline, inositol and pyridoxine, of oxytropic agents like riboflavine thiamine and nicotinic acid, of colloidal stabilizers like lecithin and albumin, and thyroid extract and alpha-tocopherol.

### Occupational Cardiology

Of late, considerable attention has been rightly paid to the question of rehabilitation or useful employment of cardiac and coronary invalids. By 'rehabilitation' is meant 'the return of a disabled person to the maximum physical, mental, emotional, social, vocational and economic usefulness'. Since coronary and hypertensive cases are usually in the prime of life, high up on the social and intellectual ladder and often the bread-winners of their families, their rehabilitation often becomes a matter of particular importance and urgency.

In a recent study in Ohio, Hellerstein and his colleagues were able to return to gainful employment 75 per cent of 535 cardiacs in 4 years; 74 per cent of these could retain their original occupational and industrial classification.

### Surgical Innovations

Cardiovascular surgery has made rapid strides within the past few years. Once abandoned as hopeless or irremediable problems, many cases of both congenital and acquired cardiovascular disease have been given new leases of life by resort to timely surgical measures. Results with surgery have been particularly gratifying in the following cardiovascular conditions, viz., (1) congenital defects like patent ductus arteriosus, coarctation of the aorta and Fallot's tetralogy, (2) valvular lesions like mitral stenosis and tricuspid stenosis, (3) affections of the coronary arteries, (4) hypertensive cases and (5) intractable cases of congestive cardiac failure.

### Resuscitation of the Dead

Until a few years ago, stoppage of the heart was considered a terminal event with no possi-

bility of revival. Now, the question of resuscitation of the dead is no longer in the realms of the impossible or unattainable, provided the heart is not too badly damaged, the brain has not been deprived too long of blood, and provided appropriate measures are promptly undertaken. In a recent review, from the U.S.A. of 322 cases of apparent death with cessation of cardiac activity, where prompt measures were applied, 110 revived sufficiently to return to work or normal activity. According to Beck, the major difficulty in such cases is not the heart but the brain, the latter being unable to withstand a lack of blood supply for more than 3 to 5 minutes, the so-called 'safe limit'.

Amongst the most outstanding scientific achievements of the past few years is the man-made and highly intricate appliance called, 'mechanical' or 'artificial' heart. This has been designed with a view to temporarily replace the heart and lungs, thus affording valuable time and opportunity for surgical manipulations. In appearance, it resembles either a cocktailshaker or a piano. In spite of its impressive appearance and size it cannot carry on the circulation for more than a short time.

According to a well-known authority, the medical man of tomorrow will probably carry in his emergency kit, some 'anti-fibrillatory drug' to prevent the 'death-throes' of the heart, and an electrical gadget or appliance ('artificial pace-maker'), to shock the heart back into normal rhythm, even a few minutes after cessation of its activity.

### Conclusion

In spite of insignificant and insidious beginnings extending over four thousand years, cardiology or the study of diseases of the heart and blood-vessels has become a living and dynamic science of gigantic proportions, surpassing in achievement and importance most of the other more ancient systems of medicine.

## MODERN CONCEPTION OF ENDOBRONCHIAL TUBERCULOSIS AND ITS TREATMENT

J. K. NAG, M.B., T.D.D.

*Calcutta.*

### Introduction

Tuberculosis of the trachea and bronchi were described by pathologists over a hundred years ago. Louis (1825) and Carswell (1838) described the condition and since then many contributions, based on postmortem material, have appeared in the literature. But it is only during the last twenty years, due to the more liberal use of the bronchoscope as a diagnostic aid in the study of pulmonary diseases, that the condition has been described clinically and the suggestion put forward that this might provide an explanation for some of the anomalies and disasters which accompany efforts at therapeutic lung collapse. It is also now well known that physiological disturbances resulting from disease in the major bronchi may be very great.

### Frequency

Figures relating to the frequency of endobronchial tuberculosis show much variation. Myerson (1934) and Bugher, Littig and Culp (1937) state that it occurs in more than 30 per cent of all cases of pulmonary tuberculosis, whereas Minkovsky (1929), McIndoe, *et al* (1939), Reiche and Frost (1934) place the incidence at 10-15 per cent of all cases of pulmonary tuberculosis. The frequency of tuberculous endobronchitis in India is not known—but it seems that it is a fairly common condition. Although tuberculous tracheobronchitis is more likely to be present in cases of advanced pulmonary tuberculosis than in early tuberculosis, it may occur at any stage of the disease. Salkin, Cadden and Edson (1943) by autopsy study of 125 cases stated that exudative cases present the highest incidence of tracheobronchitis, then the mixed and then fibroid.

### Mode of Infection

The way by which the trachea and bronchi become involved in the tuberculous process has not been definitely established. Reichle and Frost (*loc. cit.*) in a study of postmortem specimens concluded that infection most probably spreads to the trachea and bronchi by way of the lymphatic system into the mucous glands. Bugher, Littig and Culp (*loc. cit.*) in a postmortem study of 122 cases, stated that among most of the cases with tracheal infection, there was no evidence of tuberculosis of the peribronchial tissues, including lymph glands. Consequently they concluded that the tracheal lesions were definitely and solely of contact origin. In the bronchial lesions, however, diffuse peribronchial and submucosal tuberculosis both were found, so that contact appeared to be only one of the several ways in which the bronchial mucosal disease arose.

### Forms

*A non-ulcerative submucosal infiltration*—In this variety there is diffuse or circumscribed thickening due to submucosal infiltration but the

mucous membrane remains unbroken. Lesions of this type specially in an early stage may offer an extremely difficult diagnostic problem, specially if the sputum is negative. It has been observed that a cyanotic tinge which, however, is not always present, is characteristic of this condition. These lesions are usually situated in the posterolateral walls of the trachea and bronchi. This type of infiltration sometimes produce small soft granulations which may result in obstruction or stenosis of the lumen of a bronchus. Rarely, there may be an isolated, irregular tumour that projects into the lumen of a bronchus or of the trachea. Such an infiltrative process may undergo complete resolution and leave very little evidence of its previous existence or it may go on to the formation of ulcer.

*Ulcerative lesion*—This may be local or diffuse. These lesions are usually associated with exuberant granulation tissues. The ulcers vary in size from small circumscribed areas of denuded mucous membrane to multiple such areas which may coalesce to form a large area of ulceration which may involve the entire circumference of the trachea or bronchus. The floor of the ulcer is sometimes covered with a purulent exudate. These ulcers, like other tuberculous ulcers elsewhere, bleed easily to the touch.

*Stenotic lesion*—In this stage of the disease, there is narrowing of the lumen of a bronchus or trachea. A stenotic lesion may be associated with any variety or combination of the first two forms. The stenosis is firm and may reduce the lumen to a pin-point opening. The mucous membrane overlying the stricture may be smooth or may form several areas of ulceration or granulation. The stenosis is the end result of healing of submucous infiltration. When viewed through the bronchoscope, a purulent exudate will usually be found exuding from the stenotic opening.

## Signs and Symptoms

*Severe cough*—When out of proportion to the amount of disease present, this is a well known clinical manifestation. The cough is often paroxysmal and worse in damp weather. Depending on the degree of bronchial obstruction, there may be variations in the amount of sputum. Where there is interference with drainage of secretions, there may be elevation of temperature. With evacuation of the retained secretion the fever will subside promptly. Sputum may be thick, tenacious and ropy due to increased viscosity as a result of interference with function of the mucous glands of the bronchial mucosa. Patient may complain of discomfort, substernal or parasternal, and usually localized to a small area. It may be described as a pulling sensation, an itching or a burning, but rarely as actual pain.

*Wheezing*—In the presence of partial stenosis of the tracheobronchial tree, the patient will have a wheezing. The wheezing may be loud and may be heard best with the naked ear on expiration.

*Dyspnoea* when present is usually out of proportion to the amount of lung tissue involved—often paroxysmal and described as 'asthmatic'. There may be cyanosis with dyspnoea.

*Rhonchi* if localized, persistent and coarse, suggest a bronchial obstruction of some nature.

Unexplained positive sputum is one of the most important clues to a tuberculous bronchitis. Unexplained haemoptysis, where it is felt that the parenchymal lesion is not active, may be due to tuberculous endobronchitis. Unexplained spreads, occurring after apparent control of parenchymal disease may also be due to tuberculous endobronchitis.

Radiological signs of Oechsli (1941) are: (i) Blocked cavities, (ii) evidence of bronchial irregularities shown by over-exposed films, Bucky films, or tomograms (iii) airlessness of a lung, a lobe, or part of a lobe.

## Diagnosis

Visualisation through bronchoscope is the only absolute proof of the presence of bronchial lesions. Ideally, every case of lung tuberculosis should have bronchoscopic examination but in practice this is not possible and thus some process of elimination has to be practised. Established bronchial tuberculosis is associated with symptomatology, and the occurrence of one or more suggestive symptoms, together with radiological evidence, should constitute a strong case for the passage of a bronchoscope. The factors which are now accepted as indications for bronchoscopy are the persistence of positive sputum without obvious cavitation, localised and persistent wheezing, cyanosis or dyspnoea, cough out of proportion to the amount of disease present, episodes of sputum associated with elevation of temperature, atelectasis—lobar or segmental, tension cavities, and unexplained spread of disease. The diagnostic criteria are:

(1) The presence of fibrotic stenosis. (2) Definite ulceration of bronchial wall. (3) Granulation tissue projecting into the lumen of the bronchus. (4) Mucosal congestion and oedema of a degree sufficient to cause some narrowing of the bronchus. (5) A tuberculous hilar gland which has eroded the bronchial lumen.

There are few contra-indications to bronchoscopy in lung tuberculosis. If the operation is

# FENOX

## COMPOUND ISOTONIC NASAL DROPS

Containing

PHENYLEPHRINE AND NAPHAZOLINE

FENOX is indicated in the local treatment of the common cold, hay-fever, vasomotor rhinitis, sinusitis and other catarrhal conditions of the upper respiratory tract. It shrinks the swollen mucosa, maintains adequate drainage, and shortens the attack by diminishing the initial injury to the mucous membrane caused by intense congestion.

FENOX is supplied in bottles of ½ fl. oz. with dropper.

For further particulars please write to:

BOOTS PURE DRUG COMPANY (INDIA) LTD.
P. O. BOX 680, BOMBAY 1.

Boots

For the Medical Profession only

# CYSTONE

## ORAL THERAPY OF CRYSTALLURIA & LITHIASIS

✓ Corrects the crystalloid colloid balance
✓ Dissolves calculi ✓ Clears Crystalluria

"Oral medication to dissolve the urinary calculi is not known to modern medicine. I have, with keen interest, watched the clinical effects of the drug 'CYSTONE'. I have used it extensively in such conditions with complete symptomatic relief."

Benkar, Y. G., *Medical Digest*, Aug. 1954.

"I tried 'CYSTONE' tablets in my cases of Salivary calculi with remarkable and gratifying results.... 'CYSTONE' tablets seem to act on the colloid-crystalloid combination and probably by dissolving the calculi, make them smaller and allow them to pass through the duct."

Vakil, J. N., *The Indian Practitioner*, Aug. 1955.

from the makers of world-famous SERPINA

*Distributors for West Bengal & Assam*: M/S. DEY'S MEDICAL STORES LTD., 6/2 B, Lindsay Street, Calcutta-16

# Iodex

Regd

*the ideal non-staining*

**IODINE OINTMENT**

*Made in India by* **MENLEY & JAMES, LIMITED,** (Incorporated with limited liability in England) 141 FORT STREET, BOMBAY
*Sole Distributors in India:* **PHARMED LIMITED,** P.O. BOX 1185, BOMBAY

XP4Illust

carried out with caution, it rarely aggravates the disease. The procedure should not, however, be employed in the presence of (*a*) acute tuberculous laryngitis, (*b*) in a patient who has suffered from a recent severe haemoptysis, or (3) in a patient who has far advanced tuberculosis and who is suffering from toxaemia and cachexia.

In approaching the question of diagnosis, one has to remember the limitations of the bronchoscope as a diagnostic instrument. Through this instrument, one can visualise the trachea, the major bronchi and some of the medium-sized bronchi, the rest of the bronchial tree is out of the field of visualisation.

The adverse effects of tuberculous endobronchitis are produced largely through interference with bronchial drainage and aeration occurring as a result of either gross obstruction by granulation tissue or stenosis or partial obstruction from the same causes, accompanied by stagnation of secretion and loss of ciliary action. Any of the forms of endobronchial disease are capable of interfering with bronchial drainage and must, therefore, be regarded as an immediate contra-indication to pneumothorax therapy. Authoritative works of Eloesser (1934) and Rafferty (1944) have established this beyond dispute. In fact, in some cases, the condition of the bronchial lumen may be the deciding factor in selecting the appropriate method of treatment for the parenchymal lesion.

## Treatment

Ulcerative lesion of the tracheobronchial tree calls for prompt treatment and streptomycin is almost a specific. Isoniazid, para-amino-salicylic acid and thiosemicarbasone are also effective drugs for this condition. If the ulcerations are superficial and not extensive healing without stenosis is likely to occur. When this has been achieved and if the parenchymal lesion demands it, one can proceed to induce A. P. with impunity. If, however, the ulceration is extensive, healing may only be accomplished at the expense of some degree of stenosis. Pneumothorax or any other temporary collapse therapy is contra-indicated in the presence of moderate degree of stenosis, because of the immediate dangers of atelectasis and its possible sequelae and also of the more remote possibility of unexpandable lung. Furthermore, a degree of bronchial stenosis means a permanently defective bronchial drainage mechanism and the possibility of late suppurative changes in the lung parenchyma. The risk of these late suppurative changes in the lung parenchyma may be minimized by reduction of the size of the pulmonary bed, and for this a permanent form of collapse therapy is necessary. Thoracoplasty with apicolysis usually gives excellent results in most of the cases and should be the method of choice. If there is severe degree of partial stenosis or a complete stenosis of the bronchus, one is confronted with a purely mechanical problem which cannot even be adequately solved by thoracoplasty. In such extreme cases of bronchostenosis, pulmonary resection remains the only effective answer.



## References


Bughar, J. C., Littig, J. and Culp, J.—*Am. J. M. Sc.*, **193**: 515, 1937.

Carswell, R.—Pathological Anatomy. Illustrations of the elementary forms of disease. Longmans, London, 1838.

Eloesser, L.—*Am. Rev. Tuberc.*, **30**: 129, 1934.

Louis, P. C. A.—Pathological Researches on Phthisis (Translated by Charles Cowan), 1836. Hillard, Gray and Company, Boston.

McIndoe, R. B., Steela, J. D., Samson, P. C., Anderson, R. S. and Leslie, G. L.—*Am. Rev. Tuberc.*, **39**: 617, 1939.

Minkovsky, A.—*Laryngoscope*, **39**: 819, 1929.

Myers, J. A.—The Chest and the Heart, Vol. 1, 1948. Charles Thomas, Illinois, U.S.A.,

Myerson, M. C.—*Tr. Am. Bronch. Soc.*, 1934, p. 62.

Oechsle, W. R.—*Am. J. Roentgenol.*, **46**: 312, 1941.

Rafferty, T. N.—Artificial Pneumothorax, Heineman, London, 1944.

Reichle, H. S. and Frost, T. T.—*Am. J. Path.*, **10**: 651, 1934.

Salkin, D., Cadden, A. V., and Edson, R. C.—*Am. Rev. Tuberc.*, **47**: 315, 1943.


*CASE NOTES*

# INTRALIGAMENTARY SECONDARY ABDOMINAL PREGNANCY


S. K. SUR ROY, M.B. (CAL.), M.R.C.O.G. (LOND.),

*Associate Professor of Midwifery and Gynaecology,*

AND

N. ROY CHOUDHURY, M.B.B.S., D.G.O. (CAL.),

*Senior House Surgeon,*
*Department of Obstetrics and Gynaecology,*
*Nilratan Sircar Medical College and Hospital,*
*Calcutta.*


Secondary abdominal pregnancy is a rare condition. The recognition of this condition presents considerable difficulty and its diagnosis is often missed. Formidable technical difficulties may be encountered during its removal owing to the attachment of the placenta to the neighbouring structures. For these reasons considerable interest is attached to this condition, hence the following case is thought worthy of report.

### Case Report

Mrs. P. D., aged 30 years, nullipara was admitted on 8-2-1955 with the complaints of a lump in the abdomen for two years associated with slight pain at times.

About two years ago, she had two months' amenorrhoea followed by abdominal pain and bleeding per vagina, fairly profuse according to her statement. Pain subsided but irregular slight vaginal bleeding persisted for ten months. During this period there was progressive enlargement of the abdomen. For the last one year she has been menstruating regularly at monthly intervals with scanty flow and duration 3 to 4 days. L.M.P. 10-1-1955. During this period of one year the abdominal swelling became reduced in size to some extent but there was some abdominal discomfort amounting to pain at times. There was no history of any severe abdominal pain nor of passing any membranaceous substance per vagina.

She had no severe illness in the past ; general condition fair, slight pallor, no oedema. Pulse—80 per minute. Temperature—normal ; B.P.—110/80 mm. of Hg. Heard and lungs—no abnormality. Liver and spleen—not enlarged.

Per abdomen : A swelling was found in the hypogastric region extending up to the umbilicus. It was hard in consistency and had well-defined margins and was slightly mobile from side to side. No foetal parts could be palpated and there was no intermittent contractions. It was dull on percussion and silent on auscultation. Vaginal examination revealed cervix situated high up in the vagina, firm, small and nulliparous. The lower pole of the abdominal mass could be felt behind the cervix lying very low in the pelvis and foetal head with yielding cranial bones could be palpated in the mass. The uterus was of almost normal size, pushed forward, upward and slightly to the right side.

It was provisionally diagnosed to be a case of secondary abdominal pregnancy probably of intraligamentary type.

Investigations—Blood : Hb.—9·8 g. per cent, W.B.C.—8,200 per c.mm. with polymorphs 68 per cent, lymphocytes 20 per cent and eosinophils 12 per cent. R.B.C.—3·5 million per c.mm. W.R.—negative. Urea—56 mg. per cent, N.P.N.—50 mg. per cent, sugar—74 mg. per cent.

Urine : No abnormality.

Skiagram of the abdomen and pelvis (Fig. 1, *vide* Plate) showed foetal skeleton more or less in the centre with a doubled-up appearance. There was evidence of overlapping of the cranial bones. Hysterosalpingogram showed dye in the uterine cavity (Fig. 2, *vide* Plate) but there was no spilling into the peritoneal cavity after 24 hours. Uterine sound went 3¼ inches.

The patient was operated on 18-2-55 by the senior author under general anaesthesia. On opening the abdomen the gestation sac of the secondary abdominal pregnancy was found behind and to the left of the uterus, which was slightly bigger than normal and pushed to the right side. The right fallopian tube was thickened, distended and its fimbrial end was closed. The right ovary was healthy. The left tube was stretched over the gestation sac and was intimately connected with it. It was forming a part and parcel of the gestation sac. Behind the tube, the left ovary was also adherent to the gestation sac and had a normal appearance. The gestation sac was about 8 inches in diameter (Fig. 3). It was

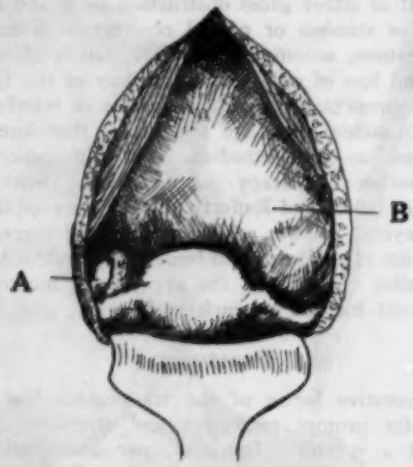



Fig. 3—Showing A—Blocked End of Right Fallopian Tube ; B—The Sac of Abdominal Pregnancy.

situated between the left lateral pelvic wall and the uterus. It then extended between the two layers of the pelvic mesocolon. The pelvic colon was stretched across its posterior surface. The greater omentum had some adhesion with the gestation sac and the uterus. Except this adhesion the peritoneal cavity was remarkably free from adhesions and the greatly narrowed chink-like pouch of Douglas could be identified easily. On incising the sac some yellowish-white pultaceous material came out and a mummified foetus was taken out. It weighed 4 lb. 2 oz. and measured 15 inches in length. The placenta was greatly shrunken and was attached to the anterior wall of the gestation sac which was partly formed by the left fallopian tube. The placenta had no additional attachment with the omentum or intestines.

The gestation sac was incised and the foetus was extracted at the commencement of the operation in order to make some space as otherwise there was hardly any room in the pelvis to work. The left infundibulopelvic ligament was clamped, cut and ligated and then, after dealing with the adhesions of the gestation sac with the omentum and the posterior surface of the uterus, the outer layer of peritoneum of the pelvic mesocolon was divided and the pelvic colon was pushed away from the gestation sac being careful to avoid injury to the blood vessels of the pelvic colon as far as possible. The gestation sac was then dissected away keeping the placenta with it. In the depth of the pelvis the sac was found adherent to the rectum and the left ureter, which was also dilated to some extent. The gestation sac was then carefully dissected away from the rectum and the left ureter and removed *in toto* with the placenta inside to which the child was still attached by the umbilical cord. The left ovary was sutured to the left cornu of the uterus. The extensive raw area was peritonised by suturing the remnant of the anterior layer of the left broad ligament partly to the posterior parietal peritoneum and partly to the visceral peritoneum of the pelvic colon.

Salpingostomy was then done for the blocked right fallopian tube, and the abdomen was closed in the usual way without drainage.

Glucose 5 per cent in normal saline 500 ml. and blood 'O' Group 300 ml. were given intravenously during the operation.

The patient had a smooth and uneventful post-operative period. Insufflation test done on 28-2-55, was negative. The patient was discharged on the tenth post-operative day with advice to come to the hospital after a few months for further investigation and treatment of her right blocked tube.

## Discussion

When the ovum survives a tubal rupture and continues its development a secondary abdominal pregnancy results. If the tear takes place in the floor of the tube the discharged ovum makes its way between the layers of the broad ligament and the condition is called 'intraligamentary secondary abdominal pregnancy'. In such cases the amnion remains intact and the placental chorion is so situated as to escape injury from the rupture. The amount of bleeding appears to be inconsiderable and the accompanying symptoms are less urgent than those of the usual types of tubal rupture. The history resembles more that of threatened abortion than that of ectopic gestation as was in this case. In advanced abdominal pregnancy, abdominal palpation may closely resemble normal gestation, the position of the foetus and the presenting part showing little abnormality; but the secondary gestation sac will not have Braxton Hick's contractions. In this case, however, foetal parts could not at all be made out on abdominal palpation as there was no liquor amnii in the gestation sac, the foetus having died about a year ago. Old cases of secondary abdominal pregnancy, in which the foetus has been retained for prolonged periods after its death, are almost incapable of being clinically diagnosed. Diagnosis of abdominal pregnancy was made in this case by vaginal examination from two points mainly : (1) presence of a foetal head behind the cervix, with (2) an almost normal sized uterus displaced to some extent forwards, upwards and to the right. It was confirmed later on by the use of the uterine sound and hysterosalpingography. It has to be stressed that one must be pretty sure of the condition before he takes recourse to the use of the uterine sound and hysterosalpingography for obvious reasons. Intraligamentary form was suspected as the foetal head was very low down in the pelvis and the mobility of the foetus was very limited.

In cases of abdominal pregnancy the foetus often perishes before term is reached; it may, however, survive until term has been exceeded. A definite attack of abdominal pain, called 'false labour' usually occurs. When present, it usually synchronises with the death of the foetus and expulsion of decidual cast. What is the cause of this false labour and how it leads to death of the foetus are not known. After this occurrence the abdominal enlargement usually decreases gradually from absorption of fluid; it may, however, increase rapidly in size either from haemorrhage into the gestation sac or from infection. In this case there was no history of 'false labour'. Appearance of normal menstruation coincided with the onset of gradual decrease in size of the abdominal swelling.

Foetal malformation is very common, about 50 per cent, in these cases. This foetus, however, showed no gross malformation.

Treatment of secondary abdominal pregnancy is surgical removal. If the child is alive and viable, the best time to operate for the sake of the child is from 36th to 38th week. If the placenta is not easily removable, which is usually the case, the umbilical cord is ligated flush with the placenta which is left *in situ* and the abdomen is closed without drainage. In twelve to twenty four months the placenta is absorbed completely without harm. Very severe, uncontrollable and fatal haemorrhage may occur when the active placenta is separated. Thrombosis of the placental sinuses quickly follows foetal death. The placenta can then be removed without alarming haemorrhage. In the present case the placenta was nearly completely absorbed and entirely attached to the gestation sac which could be removed, though with difficulty, *in toto*. Special care is needed while dissecting away the lower pole of the intraligamentary gestation sac owing to the possibility of adhesion with the ureter and the rectum as was in this case.

## Summary

A case of old intraligamentary secondary abdominal pregnancy is described where the condition was accurately diagnosed clinically before laparotomy and the gestation sac was completely removed with sacrifice of the affected fallopian tube only.

ACKNOWLEDGMENTS

Thanks are due to Dr. A. K. Datta Gupta, Superintendent, Nilratan Sircar Medical College Hospital, Calcutta, for the permission to publish the record of the case and to Sri Asoke Sen Gupta for the drawing.

## INTRA-UTERINE DEATH OF FOETUS FOLLOWED BY MASSIVE INFECTION OF THE UTERUS

N. SUBHADRA DEVI, M.D., M.R.C.O.G., D.C.H. (LOND.),

*Professor of Obstetrics and Gynaecology, Andhra Medical College and Obstetrician, King George Hospital, Visakhapatnam.*

Mrs. A. S., aged thirty years, 5th gravida, was admitted to the maternity wards of the King George Hospital, Visakhapatnam on 21-6-54 with a history of nine months amenorrhoea. A week before admission, she developed pain in the abdomen, difficulty in micturition and defaecation and fever which continued till the day of admission. She had been treated for the same by her doctor with chemotherapy and antibiotics.

All her four previous pregnancies ended in natural labours and living children at term. Last delivery was three years ago. There was nothing significant in the menstrual history.

She was thinly built, and was ill and toxic in appearance. Her skin was dry and inelastic. Tongue dry and coated. She was apparently not anaemic. There was no oedema or jaundice. Temperature 100°F. ; pulse rate 100 per minute ; respiration 20 per minute ; Hb. 75 per cent (Sahli's) ; B.P. 100/70 mg. of Hg. The liver and spleen were not palpable.

Obstetric examination revealed a uterus enlarged to the size of 36 weeks' pregnancy. The bowels were distended and foetal parts were not made out clearly. The head was on the left side close to the umbilicus. It was collapsed and overlapping of the skull bones could be made out by palpation. Foetal heart sounds were not audible.

Intrauterine death of the foetus was suspected and a skiagram confirmed this. Fig. 1 (*vide* Plate) showed—(*a*) transverse lie of the foetus ; (*b*) collapse of the vertebral column and ribs and (*c*) positive Spaulding's sign.

Examination of blood and urine revealed no abnormality.

Intrauterine death of the foetus with probable infection of the uterus was diagnosed.

She was given penicillin 2 lac units B.D. and sulphadiazine 1 g. every 6 hours.

*Progress*—The temperature persisted and on 27-6-54 the abdominal distension increased and there was tenderness all over the abdomen. The abdomen was resonant except for the area occupied by the uterus. The uterus was unusually lax, and Braxton Hick's contractions were not elicited thus suggesting even a secondary abdominal pregnancy.

Other investigations were done to exclude systemic causes of pyrexia. The skiagram of the chest revealed no abnormality. Sputum was negative for acid-fast bacilli. Sedimentation rate was 95 mm. per hour. Blood group was 'B'. W.B.C. 15,400 per c.mm. with polymorphs 80 per cent, lymphocytes 17 per cent, eosinophils 1 per cent, and monocytes 2 per cent. As the pyrexia did not respond, she was put on chloramphenicol 250 mg. orally every 6 hours. A vaginal examination was done to exclude secondary abdominal pregnancy, and to see if labour could be induced. The external os admitted a finger. Membranes were intact. On introducing a finger into the uterine cavity, the foetal parts could be felt. The uterus was not acting.

As spontaneous labour failed to set in, being a multiparous woman, and the foetus soft and macerated, an attempt was made to induce labour by an intravenous oxytocin drip with 2½ units in 500 c.c. of 5 per cent glucose in normal saline. This however failed to induce labour.

The next day the bag of membranes was noticed to be bulging at the vulval outlet and ruptured spontaneously allowing blood stained liquor amnii to escape.

On 4-7-54, the temperature and abdominal tenderness persisted and the vaginal discharge became offensive. She had not gone into labour. She was given 3,000 units of tetanus antitoxic serum and 10,000 units of antigas gangrene serum prophylactically and chloramphenicol was continued.

On 6-7-54, the patient had peritonitis with marked distension of the abdomen, tenderness and she was very ill.

A second vaginal examination revealed no change in the cervix. The foetal parts could now be felt more easily in the lower segment. Purulent offensive discharge was present.

Culture of discharge showed *staphylococcus aureus*.

With chloramphenicol orally and intravenous fluid therapy by 11-7-54 the acute peritonitis subsided gradually and the uterus came down to a height of a 30 weeks pregnancy. The general condition did not improve and the pyrexia continued between 100 and 102°F. As spontaneous labour did not set in, and massive infection of the uterus was present, it was decided to perform a laparotomy and hysterectomy.

On 13-7-54, under heavy spinal anaesthesia, the abdomen was opened by a median subumbilical incision. The parietal peritoneum was oedematous and friable. The anterior wall of the uterus was adherent to the parietal peritoneum. It was soft, friable and of the consistency of pultaceous fat. The rest of the abdominal cavity was neatly walled off by the uterus. The softened, collapsed foetal parts were felt in this soft bag like uterus. It was opened into and the foetus in the transverse lie and highly decomposed was removed. The placenta and cord were lying at the bottom of the uterus, free and were removed. The internal os of the cervix admitted a finger, and could be seen at the bottom of the sac, showing it was the uterus and not an ectopic gestation sac. The uterine cavity was full of pus but no gas. This was cleared off and sulphanilamide powder 5 g. and 5 lac units of penicillin solution were put into the uterine cavity. Hysterectomy could not be done owing to the adhesions and the thinness and friability of the uterine walls ; the uterine wall was closed by continuous catgut except in the lower one inch, where a rubber drain was introduced for drainage. The abdomen was closed in layers after removal of a piece from the uterine wall for histological examination.

With blood transfusion and plasma substitutes she rallied round. The foetus was a full term male. It was macerated and highly decomposed. Over its back which was the presenting part, the skin and muscles were absent exposing the spinal column. Obviously the infection was responsible for this.

*Postoperative progress* was uneventful with penicillin and chloramphenicol and intravenous fluids, she improved remarkably well. The drain was removed after 48 hours. The pyrexia was rapidly controlled. The wound healed by first intention. Purulent vaginal discharge continued for two weeks and cleared away with saline irrigation.

5-8-54—Examination revealed a well healed abdominal scar. The uterus was well involuted, and in midposition. The os was closed. The lateral fornices were clean. There was only slight induration in the pouch of Douglas.

She was discharged from the hospital and advised to report after 3 months for hysterosalpingography and hysterectomy, if necessary. She, however, did not come back.

Microsection of uterine tissue showed extensive necrosis with fatty changes in the uterine walls

### Comments

An unusual case of intrauterine death of the foetus with spontaneous infection of the uterus which was so massive as not to respond to antibiotics and chemotherapy is reported. As a result of the heavy infection, the uterine musculature was paralysed and even Braxton-Hick's contractions were not elicited. Spontaneous labour did not ensue and even oxytocin failed to stimulate the uterus to contract.

Infection of the uterus harbouring a dead foetus is a distinct danger, but is said to occur only after rupture of the bag of membranes. Rupture of the membranes is therefore not advisable when the uterus is the seat of a dead foetus. However spontaneous infection can also occur with a dead foetus in the absence of interference.

Laparotomy which is contra-indicated in the presence of sepsis was unavoidable in this case, being the only means of removing the uterus and its contents. Hysterectomy however could not be done as the uterus was adherent and very friable and necrotic. After removal of the foetus, further progress was remarkable and recovery completed.

Pathological examination revealed gross infection of the uterus with necrosis and extensive fatty changes.

It is interesting to speculate on the future problems in this woman; whether the uterine cavity will be reformed, and menstruation re-established, and what would be the outcome if another pregnancy should ensue.

---

In view of the nature of the disease and the treatment adopted, amenorrhoea and sterility are likely to occur and may indirectly be life-saving, for pregnancy in all probability would cause a rupture of the uterus. Culture of the uterine pus should have provided interesting information.—Ed., *J. Indian M. A.*

## SPONTANEOUS PASSAGE OF A BIG VESICAL CALCULUS IN A FEMALE

M. RAJESWARI, B.Sc., L.M.P.,

AND

D. SHAMANNA, B.A., M.B.B.S.,

*District Hospital, Chitaldurg.*

A woman, aged 60 years, from the town of Chitaldurg was admitted to the Hospital on 10-5-55 with a history of frequency of micturition and occasional pain in the perineum. The diagnosis of vesical calculus was arrived at by the sound and feeling produced by passing a female metal catheter and also by radiography. A surgical operation was suggested to the patient for the removal of the stone, but it was refused.

On the night of 17-5-55 while passing urine, the patient noticed a sudden stoppage of the flow and some object making its appearance at the external urethral orifice. She attempted to push the object back, but another powerful gush of urine came out and along with it she passed the stone which fell on the floor. Subsequently her micturition became normal. Examination of the urethra after the passage of the stone did not reveal any sign of trauma. A day after the passage of the stone, she left the hospital.

The stone was oval and flattened with a smooth surface measuring 3 inches in its long diameter, 1½ inches in its short diameter and was 0·8 inch at the centre (Fig. 1, *vide* Plate). The weight of the stone was 42 g. On section it was distinctly laminated (uric acid calculus).

### Comments

The incidence of vesical calculus is not so common in females. The female urethra is about 4 cm. long and 6 mm. in diameter. Calculi not exceeding ¼ to ¾ inch in diameter can be extracted by dilating the urethra. Smaller stones may be voided through the female urethra spontaneously. But a stone of the size mentioned being passed out of the urethra is a rarity and hence the case is reported.

## PROLONGED USE OF PETHIDINE CAUSING TEMPORARY PSYCHOSIS

B. B. MUKHERJEE, M.B., M.R.C.P. (LOND. & EDIN.),
*Sanctoria Hospital,*
*P.O. Dishergarh (Burdwan), West Bengal.*

Temporary psychosis appeared to have developed in an individual on prolonged use of pethidine. The author has not come across with any such case reported in the literature.

### Case Report

B. M., 42 years, male, medical practitioner by profession, was admitted to the hospital on 31-3-54 with multiple fractures of the pelvis and fracture of the left calcaneum as the result of a fall from the top of his two-storied house. There was excruciating pain in the pelvis radiating down the lower limbs, particularly on the left side.

The patient had been addicted to alcohol and the fall was attributed to a bout of its excessive intake. There is no history of insanity in the family. No sign of mental disturbance was noticed in the patient ever before.

Skiagram did not show much displacement of the fracture fragments of the pelvis. He was immobilised by plaster. For the excruciating pain he was given injections of pethidine hydrochloride 100 mg. often twice daily since the very day of his admission to the hospital. Other analgesic drugs were tried but they were not found to be quite as effective. When the pain became less in about 3 weeks' time pethidine was discontinued and other analgesic tablets were substituted. Immediately on admission the patient developed an acute bronchopulmonary infection for which he was given treatment. The condition of the patient improved and as the patient wanted he was discharged from the hospital on 1-5-1954 with advice of immobilisation for a further period.

On the 15th of December, 1954 he developed mental changes which to start with only lasted for a few hours in the evening. Within a few days the mental derangement was noticed throughout the day and night. He was irritable, restless, incoherent and somewhat obstinate. His behaviour changed and he wept or laughed without sufficient reason. He became forgetful and inattentive, taking less interest in the surroundings. He had occasional delusions. There was a fear of sudden death. Insomnia was a marked feature.

The patient then admitted that he had been taking for a long time pethidine hydrochloride 100 mg. twice daily mostly by injection once in the afternoon and once at bed-time. He developed this drug habit when pethidine was given in the hospital for 3 weeks since 31-3-1954. He continued to have his pethidine regularly since the discontinuance of the drug at the hospital. His confession of the prolonged use of pethidine could be confirmed to be true from the people who helped him to get a regular supply. His fully developed mental changes were noticed on 18-12-1955, and he had his last injections of pethidine on the previous day. He made the confession of regular pethidine injections as he was unable to continue it further.

He was treated with injections of distilled water being told that pethidine was being injected and 1 to 2 grains of phenobarbitone at bed-time for inducing sleep. In about a week's time, the mental condition began to improve and in about another 7 to 10 days' time his mental picture gradually came back to normal. Since then he has been keeping absolutely normal. He now only occasionally takes phenobarbitone at bed-time for insomnia.

### Discussion

This case appears in all probability to be a case of temporary psychosis developing as a result of prolonged use of pethidine 100 mg. twice daily mostly by injections for a period of 8½ months. When pethidine was discontinued the mental picture gradually came back to normal. The appearance of the fully developed mental picture during the days of pethidine injections excludes the possibility of mental symptoms precipitating due to withdrawal of the drug. There is no history of insanity in the family.

This is not a disorder from alcoholic intoxication as it could be definitely ascertained from inmates of the house that he had not touched alcohol since the day of accident. The blood W.R. and Kahn tests were found to be negative.

### Summary and Conclusion

A case has been reported where there is strong suspicion of temporary psychosis developing as a result of prolonged use of pethidine.

JOURNAL OF THE
INDIAN MEDICAL ASSOCIATION
CALCUTTA, DECEMBER 1, 1955

## KEEP THE FLAG FLYING

Ninetysix years ago in the battle fields of Solferino in Italy, a young Swiss from Geneva, Henri Dunant sowed the seed of the Red Cross Organisation. It took six painstaking years of pleadings and sacrifices to bring life into the seedling. To-day it is one of the biggest international aid organisations with 74 countries as its members, with more than three million volunteers.

It is an organisation of selfless spirit with no colour or political bar. There is no place for complexity or doubt where goodwill, charity and sacrifice dominate. The continued existence and popularity of this organisation have enhanced the worth and the dignity of the *Homo-sapiens*.

Though conceived in the fields of battle its functions are not limited to wars. It not only combats the miseries of the war but the evils and ills during peace as well. Since the World War II the worst year of disaster was 1954. Vorarlberg and Tyrol were struck by avalanches, Austria experienced its greatest flood havoc since the 16th century, Danube overflowed to cause miseries to Czechoslovakia, Hungary and Yugoslavia, Salerno was inundated in Italy, Philippines was shaken by one of the worst earthquakes ever to occur. Volos experienced three violent earthquakes within a period of 72 hours, followed by a terrific shaking of Algeria, the worst in forty years.

It is impossible to anticipate when and how a country may be hit by a natural calamity—a flood —a hurricane—an earthquake to destroy one's home and lifework in a matter of minutes. The Red Cross rushes in with the much needed medical supplies, food and equipment, and thus enables the survivors to start anew.

The floods in India during the last monsoon wrought havoc unprecedented in the history of Asia since 1870. Over 32,000 villages were inundated and hundreds completely destroyed in the States of Assam, Orissa, Uttar Pradesh, West Bengal and East Punjab. Nineteen million persons out of 136 million, that is, 1 in every 7, were affected. The Red Cross Societies, local, national and international, all came forward to help the affected populace utterly dependent on others for shelter, food, clothing and medicine.

The humanitarian activities of this society are not kept limited to periods of natural ravages. During normal times it has manifold activities. In Australia the Volunteer Aids of the Red Cross will complete eight years of unique service of daily *insulin rounds* for single elderly diabetics. Volunteers of Japanese Red Cross are translating 1000 books into Braille for the blind, and the German Democratic Republic Red Cross is training 130 dogs a year, as all *seeing eye* for the blind.

The Red Cross in India came into existence only thirtyfive years ago. Yet its progress is good. The Director of the League, Organisation and Development Bureau, during his recent tour in India remarked that the work of the Indian Red Cross is most striking and is spreading far and wide. The Indian Red Cross displays the true Red Cross initiative and service.

Instructions to the people in health matters, maternity and child welfare, training of midwives and health visitors are some of the large scale peace-time undertakings of the Indian Red Cross. Arranging baby shows, teaching of first-aid, running nursery schools, milk canteens and Red Cross homes and opening feeding centres for the undernourished are no less important amongst its various activities. More than 800 Indian ex-Service personnel and 6 British ex-Service men in India, received contributions towards their expenses for medical treatment.

All these charitable undertakings end up in an account. Financing such projects requires huge sums. This can only be covered by gifts, benefits, contributions and subscriptions. Last month a month-long drive was started by the State of West Bengal. It will be very helpful if other States emulate this example.

"When the approach is correct it is not difficult to obtain funds for charity." We believe in it. Our National Society deserves our sympathy, sacrifice and services, so that the flag symbolising devotion to the sick and the wounded and *people helping people*, keeps on flying.

# CURRENT MEDICAL LITERATURE

### Diabetic Bone Disorders

BOULET AND MIROUZE (*Ann. Med.*, **55** : 764, 1954, Ref. *Abst. World Med. Bull.*, **17** : 480, 1955) from an analysis of the records of 265 diabetic patients aged 8 to 80 years, with special reference to the occurrence of bony complications, which are divided into osteoporotic and hyperostotic types observe :

Osteoporosis was found in 13 women and 4 men ranging in age from 40 to 74 years (average 50), among whom the mean duration of diabetes at the time of discovery of the osteoporosis was 2 years. Pain, commonly of root distribution or in the chest or abdomen, was the most prominent clinical feature and was the first symptom in 40 per cent of cases. Radiologically, the main features were the following : (*a*) bony rarefaction with "pencilling" of the vertebrae ; (*b*) signs of increasing bone weakness ; (*c*) osteophyte formation ; (*d*) osteoporosis of the feet and sometimes of the skull ; and (*e*) calcification of the vessels. No abnormality in the serum calcium, phosphate, or phosphatase levels was found and no increase in urinary calcium content was discovered. Biopsy of bone was carried out in 4 cases, the microscopical appearances of which were characteristic and showed a marked lack of osteoblasts, quite unlike the appearances in osteomalacia and hyperparathyroidism. Both the vascular and neurological complications of diabetes were frequently present.

Evidence of hyperostosis was found in 10 women and 9 men, their ages ranging from 51 to 80 years (average 68). Clinically, there were few symptoms and little of note was usually to be elicited—mild, non-ankylosing spondylitis and periarticular nodules on the feet being the most frequent finding. Radiologically there was a perivertebral cage of calcification, and a similar periosseous zone was seen in the feet—particularly around the calcaneus, where in addition exostoses might be present. Biopsy of the iliac crest in 6 cases showed an increase of fibrous tissue with accompanying osteoporosis.

The steroid content of the urine was measured in 9 cases of osteoporosis, in 3 of which the 11-oxysteroid content was increased in 4 normal, and in 2 reduced. The 17-ketosteroid content was constantly below normal. In the hyperostotic form there was no significant abnormality in the urinary excretion of steroids. The authors put forward the hypothesis that diabetic osteoporosis has an adrenal or pituitary-adrenal basis and diabetic hyperostosis a pituitary basis.

### Management of Haemorrhage from Oesophageal Varices

WILCOX (*Florida M. J.*, **41** : 721, 1955, Ref. *J.A.M.A.*, **158** : 597, 1955) from analysis of the observation on 34 patients with haemorrhage from oesophageal varices points out two ways in which the oesophageal and gastric veins may become dilated owing to portal hypertension. The age of the patient is of help in the diagnosis, most patients having their first haemorrhage from oesophageal varices between the fourth and sixth decades of life. The physician should attempt to elicit a history of previous hepatitis, jaundice, cirrhosis, splenomegaly, pancreatitis, alcoholism, varices, or peptic ulcer. Around 16 per cent of patients with cirrhosis have an associated peptic ulcer. Emesis of large amounts of bright red blood, signs of shock, and enlargement of the liver and spleen are of diagnostic significance. In all of the cases reviewed here the presence of oesophageal and/or gastric varices was proved by oesophagram, oesophagoscopy, at operation, or at postmortem examination. In 28 of the 34 cases the lesion was bleeding when the patient was admitted to the hospital or bled during the period of hospitalization, or a massive haemorrhage occurred as a terminal event. Blood transfusions should be used freely in the treatment. Rising pulse rate, falling blood pressure, falling haematocrit reading and red blood cell count are guides for the use of blood. The author administers 500 c.c. of blood for each 3,000,000 red cell deficit in the blood count. If the prothrombin time is prolonged, large doses of vitamin K should be given. In addition to these supportive measures the author uses the Sengstaken tube to produce a tamponade effect in the lower part of the oesophagus and cardia of the stomach. This tube, a three lumen one, with a gastric and oesophageal balloon and a gastric tube, is superior to the two lumen tube, first because the third lumen permits the aspiration of the gastric contents to determine absence of or continuation of bleeding, and, secondly, nutritious liquids as well as water can be administered through the gastric tube, and, if necessary, barium can be given for roentgen study. In the 28 patients who bled, oesophageal and gastric tamponade was tried in 12, of whom 4 died and 8 survived the haemorrhage. Of the 16 in whom the tube was not used, one survived a mild haemorrhage and 15 died. The use of oesophageal and gastric tamponade by means of the three lumen, two balloon tube helps tide the patient over a critical period and allows time for preparation for surgical treatment. Of the eight who survived the haemorrhage with the aid of the tube, three are still living following surgery for portal hypertension : one died 10 days after a portal caval shunt, one was sent to another hospital but died before operation was performed, two others died following operations, and one died on his second admission before therapy was started.

### Protection from Noise of Aircraft

PARRACK (*Arch. Industr. Hyg.*, **10** : 273, 1954, Ref. *Brit. J. Physical Med.*, **18** : 42, 1955) describes methods to reduce human exposure to harmful degrees of noise associated with procedures intended to limit any noise produced. It is recognized that much loss of efficiency and comfort result from such noise. Aircraft noise is not fundamentally different from other industrial noise although near its source it may be more penetrating. Modifications in aircraft design and the study of aerodynamics and acoustics are involved. All modern noise control equipment is intended to diminish acoustic energy as the sound wave passes through it. Thus a muffler may be attached to an engine and aerodrome buildings be designed to limit the noise of the aeroplanes impinging upon staff working in them. Men working on the ground close to the aircraft engines may suffer damage to the ear unless earplugs are provided. The energy derived from modern aircraft noise

is scattered more or less uniformly throughout the range of audible frequencies.

Positions to the side or in front of the aircraft on the ground are safer than those behind it and in the last position a dangerous level of noise may be produced. Yet even with intermittent exposure maintenance personnel may develop deafness unless protective devices are used at all times. Persons 50 feet to the side of an engine or halfway between this position and the rear of the aircraft at the same distance may suffer serious damage if protective devices are not used. The ear muff or cup worn over the external ear may be used alone or with earplugs. The former are apparently most useful in giving protection at low frequencies It has been suggested that a helmet over the skull might protect from intense noise but if the lower jaw or face is exposed to sound conduction from these any protection given to the skull is neutralized. To protect personnel from noise levels of 145 decibels a total enclosure of the body may be needed possibly in the form of a small self-propelled vehicle. High level sound causes marked sensations of vibration in the thorax or abdomen and there is some evidence that co-ordinated muscular activity and locomotion may suffer interference from sounds in this range. The writer describes the general symptoms which may develop from exposure to aircraft noise.

### Cytodiagnosis in Cancer of Prostate

GUNN AND AYRE (*J.A.M.A.*, **158**: 548, 1955) write that cytology, properly applied, can aid in the detection of cancer of the prostate in a preclinical stage. Six hundred eighteen patients clinically normal for cancer of the prostate were screened cytologically by a simple office procedure. Unsuspected positive cytodiagnosis for malignancy was found in 37 cases, leading to further clinical investigation and evaluation.

### Treatment of Tetanus

CHRISTENSEN (*Minnesota Med.*, **38**: 397, 1955) gives in the following lines a plan of treatment of tetanus:

The following plan of treatment is based partly on the experience of the author in treatment of approximately seventy-five patients, some of them in the military hospital mentioned and some in the Mayo Clinic, partly on the experience of others at the clinic, and partly on experience recorded in published reports.

1. Preferably the patient is hospitalized, thus insuring close supervision and good nursing care.

2. On admission to hospital the patient is given tetanus antitoxin. The aim is to give the quantity necessary to neutralize any circulating or uncombined toxin and any that will be produced prior to elimination of the focus of infection. As yet, no method has been developed for determining the adequate amount for an individual patient. After a test for hypersensitivity has been made, 15,000 to 30,000 units are arbitrarily administered intravenously, or 10,000 to 30,000 units are given intramuscularly, either or both. The large amounts are used when the wounds are deep, penetrating, or badly infected. Also, if symptoms are well advanced or are progressing rapidly, and therefore, it is suggested that overwhelming infection has occurred, the larger doses are used. Smaller amounts are then given for the next few days, until the focus of infection has been removed and the disease process stabilized.

Whenever tetanus antitoxin in horse serum is given, it is essential to have close at hand ampules of epinephrine, needles and syringes, along with oxygen and fluids for intravenous injection in case of anaphylactic reactions. Diphenhydramine hydrochloride (benadryl) or tripelennamine hydrochloride (pyribenzamine), in doses of 25 to 100 mg. (depnding on age) every four to six hours, helps to prevent or to suppress serum reactions. These drugs also aid in sedation. Both are given by mouth.

3. The amount and kind of sedative drug used again depend on the needs of the individual. Enough is that amount that will keep the patient reasonably comfortable and allow periods of restful sleep. Barbiturates, chloral hydrate, bromides and paraldehyde have been used to control mild or moderately severe tetanospasms. Depending on the age of the patient and the severity of the disease, tribromoethanol (avertin), 50 to 70 mg. per kilogram of body weight has been used in a rectal retention enema; this is the drug and the method of choice for sedative control of severe tetanospasms. Usually restful sleep for three to six hours supervenes and, on awakening, the patient frequently is sufficiently relaxed to be able to take food and fluids without too much difficulty. One or two administrations per twenty-four hours usually suffice but occasionally three injections are necessary. These enemas have been considered lifesaving in some cases at the clinic. Except for proctitis in one case, apparent side effects or reactions have been minor and few. Morphine sulfate, curare or other such respiratory depressant drugs, are contraindicated. Codeine and meperidine hydrochloride (demerol hydrochloride) are useful adjuncts. In addition to relieving pain they tend to lessen the frequency with which tribromoethanol (avertin) must be used.

4. For adults, penicillin and dihydrostreptomycin in doses of 1,000,000 units and 1 to 2 g. respectively, are effective as any antibiotic therapy in combating *Clostridium tetani* and symbiotic organisms. Proportionately smaller doses are used for children. Antibiotic treatment affects the course of the disease only in helping to eradicate a focus, or foci, of infection and thus prevent production of more exotoxin. Even large doses of antibiotics cannot be entirely relied on to do this, however, particularly if wounds are deep and badly infected. Clostridia thrive in dead or dying tissue, where the blood supply is reduced or absent Antibiotic treatment should be continued until the focus of infection has been eliminated. It is useful, too, in prevention or treatment of the pneumonia which is prone to develop in severe cases.

5. When treatment with tetanus antitoxin and antibiotics has been started, adequate debridement and other care of the wound are in order. Lethal doses of toxin often can be produced in trivial wounds. The natural tendency is to be too conservative. When amputation or extensive debridement is necessary, general anesthesia is best effected by giving thiopental sodium

(pentothal sodium) intravenously, or tribromoethanol (avertin) rectally. Ether tends to be irritating to the respiratory tract, to increase laryngospasm and to predispose to pneumonia. If use of an oxidising agent is indicated, moist potassium dichromate dressings are better than hydrogen peroxide dressings, which frequently are irritating to the skin.

6. Tracheotomy should be done whenever respiration is significantly embarrassed by laryngospasm or accumulation of tracheobronchial secretions.

7. A high-caloric diet is indicated where metabolism is greatly increased Liquid to soft foods are tolerated better than are solids. Multiple small feedings are more suitable than three large meals. A nasal tube can be used when necessary and when it does not aggravate the condition. Supplementary fluids containing glucose proteins, electrolytes and vitamins are given parenterally when they are needed to maintain hydration, nutrition and electrolyte balance.

8. Oxygen and a portable respiratory are used when indicated.

9. Urinary retention has to be relieved in some cases.

10. Cortisone, compound F (hydrocortisone) and adrenocorticotropic hormone (ACTH) are the newest preparations which apparently are useful in this condition. The action and value of hormonal therapy in tetanus have not been exactly determined. At present, the members of the team described earlier reserve use of the hormones for two groups of patients: (1) allergic patients who react to, or who are known to be hypersensitive to, tetanus antitoxin. For example: One patient had chronic asthma and hay fever. A year before his admission with tetanus, he had been given tetanus antitoxin after an automobile accident. A severe reaction followed. Intravenous administration of adrenocorticotropic hormone (ACTH) and then oral administration of cortisone made it possible to follow the usual programme of administration of tetanus antitoxin.

Sheer exhaustion often is the only apparent cause of death in cases of this disease. When exhaustion becomes apparent, the team uses cortisone purely as a supportive measure in an attempt to maintain life while the patient is passing the crisis of this self-limited disease. Depending on the age, sex and condition of the patient, in the absence of absolute contraindications, 100 to 300 mg. of cortisone is given each day in divided doses until the crisis has passed. Thereafter doses are reduced and gradually use of the preparation is discontinued. Oral administration is preferred but the substance can be given intramuscularly if necessary.

### Aldosterone in Urine

AXELARD AND OTHERS (*Brit. M. J.*, **1**: 107, 1955) write that the amount of sodium-retaining corticoid that can be extracted from urine by chloroform depends partly on the method of hydrolysis. Of the procedures studied, the greatest yield was obtained from urine standing for one day at pH 1. Smaller quantities were obtained after brief exposure to pH 1 or after incubation at 37°C. and pH 4·8. Mammalian beta-glucuronidase caused a further release of material. Insignificant activity was found in extracts from urine at pH 6·5.

When yields obtained by each method were compared, the sodium-retaining activity of urinary extracts was small but still measurable in health on unrestricted sodium intake. Reduction of dietary sodium was followed by increased sodium-retaining activity. Patients with congestive heart failure, hepatic cirrhosis, or the nephrotic syndrome had a high output of sodium-retaining material when the urinary sodium was low. In all cases in which urine extracts were chromatographed, sodium-retaining material found in a single fraction was shown to be aldosterone in one case. It seems highly probable that the sodium-retaining corticoid with similar properties, found in the other cases, was aldosterone.

### Natural History of Pelvic Tuberculosis

BARNS (*J. Obst. Gynaec. Brit. Emp.*, **62**: 162, 1955) gives in the following lines the summary of his observations on the natural history of pelvic tuberculosis:

The mode of invasion of the genital tract in 107 women suffering from pelvic tuberculosis has been investigated.

A high proportion of patients (73 per cent) showed evidence of other forms of tuberculosis; pleural effusion and tuberculous peritonitis each occurring in approximately one-third of the cases. In only 8 patients were these co-existing lesions still in an active state.

The primary site of tuberculous infection was located in 87 patients; this was found to have been in the lung in 46; in the glands of the neck in 5; in the abdomen in 5; and on the skin in 1 case. This suggests that invasion of the pelvis had taken place by the haematogenous route in at least 52 (90 per cent) of these patients.

Evidence of the site of the primary was available in 20 patients who had had tuberculous peritonitis. In only 1 out of every 4 of these cases was the site of this primary within the abdomen. It would therefore appear probable that peritonitis had arisen in at 75 per cent of these patients as the result of spread of infected material from a pre-existing tuberculous focus in the pelvis.

The infecting organism was found to belong to the human strain tubercle bacillus in all cases in which culture was successful.

The date of the primary infection was identified in 37 patients. A relationship has been shown to exist between the time at which the patient receives her first infection, and the time at which the infection proceeds to invade the genital tract from this primary source. In many cases it is only a matter of a few months before the invasion occurs; in more than half of the patients (56 per cent) there was evidence that pelvic infection had taken place within 3 years of the primary. From this evidence it is believed that dissemination to the pelvis probably takes place during the period of activity of primary tuberculous lesions.

Genital tuberculosis is shown to be a particular risk accompanying primary tuberculous infection during adolescence. It has been suggested that this should provide additional grounds for urging that girls be rendered tuberculin positive by B.C.G. inoculation before reaching this age.

## CURRENT TOPIC

### HOW TO PRESENT A SCIENTIFIC PAPER BEFORE A LARGE AUDIENCE†

RICHARD A. KERN, M.D., F.A.C.P.,
*Secretary General, American College of Physicians.*

The meetings of many medical societies now provide an audience that can number in the thousands, thanks to modern methods of voice amplification and visual projection. Such large audiences attract essayists whose work has won them high rank in their chosen field. Their names on programs, in turn, attract yet larger numbers. Unfortunately, a man who is top-flight as a scientist may nevertheless be most ineffectual on the lecture platform, usually because he makes some simple but crucial mistakes in his manner of presentation. Yet every such mistake is easily avoidable. On the basis of what this writer has suffered while listening to others at important meetings in the last thirty years, he is moved to offer some suggestions to future speakers.

If you have been invited to appear on some major program, it is hoped you will scan this editorial. You might find here a point or two that will help to make your presentation a bit more effective. If so, it will have been worth both the reading and the writing.

*Time Limit*: You have been assigned a fixed time limit for your entire appearance. Please note that this is an outside limit, that begins with the first word of introduction by the chairman and ends with the moment when you finish, or are requested to stand down. His words deduct about twenty seconds from the total time at your disposal, and you may lose even more if you are not as close as possible to the podium when called upon.

Of course, you have given your text several time trials in advance. All too often this results in your trying to read it a bit faster next time in order to get under the wire. What you really should do is shorten the text each time that it still seems too long. This can be done without sacrificing any vital point. Merely culling unnecessary words may be enough, and it teaches you to express clearly in a few words the thought that was obscured by verbosity.

Don't forget to include in your timing the demands of your lantern slides. Their text you have reckoned, of course. But you must also allow a few seconds for calling for the next slide, for looking at the slide to orient yourself, and for any "aside" that the moment may require. If the operator of the lantern gets a slide up-side down or out of order, the time lost in correcting this is nevertheless charged against your limit.

Remember that on the platform you must speak more slowly than in a classroom without the use of a loud speaker. Public-address systems in large auditoriums produce echos and reverberations: if you read deliberately, every word will be clearly heard; if you read rapidly, then your words will tend to run together and can become an unintelligible jargon. You should therefore allow at least 15 per cent more time for platform reading than it takes in your timed trials readings slowly before the bathroom mirror.

Remember that the paper to be printed may be a page or two longer than the one you read, without offending either the editor or the reader. But no one can speak more than a limited number of words per minute without jamming the loud speaker and losing the listener. The worst sin against the time-limit, and the best way to ruin your prospects for future invitations by all who hear you, is to try to read a 23 minute paper in 20 minutes. But a 17-minute paper possesses the best ingredient for a successful presentation.

*Microphone Technic*: When you speak to an audience numbered in the thousands, you are 100 per cent dependent upon the correct use of the microphone 100 per cent of the time. If your technic is only 98 per cent correct, or if it is perfect only 98 per cent of the time, you will probably fail to get across far more than 2 per cent of your message, because the very words that failed to get through may have been the whole key to your thesis.

The microphone has strict limitations of performance which you must recognize. It magnifies by a fixed number that which you put into it. If it is fixed in space (for example, the microphone on the lectern), then you must maintain a fixed distance between your mouth and the microphone. This is best accomplished by holding with one hand to the edge of the lectern from start to finish. If you rock back and forth on your feet as you speak, or if you alternate between standing up straight and leaning confidentially on the lectern, you will alternately shout or whisper to your audience.

Your voice has its limitations, too. The chief ones are direction, loudness and pitch. The direction of your voice is straight forward and slightly downward from your mouth in a rather narrow beam. You should therefore speak only when facing the microphone, which should be at a level slightly below that of your mouth. The microphone will lose you, if you turn away and speak while looking at a lantern slide. Therefore, if you use slides, turn a moment in silence to see that the slide is right, then turn back to the microphone before you speak again. To a lesser extent, the microphone will lose you if your head bobs up and down as you look now at the audience, and now at your manuscript, especially if the microphone is at a higher level than your mouth.

Loudness of your voice is in part a factor of the effort you put into it. But loudness is also related to pitch: the lower the pitch, the less loud the sound you produce. When you speak in a conversational tone in a small group, the ends of your sentences are audible only to those nearest you. If you are a good speaker in a class room without the aid of an amplifier, it is because you have learned to keep both loudness and pitch up, so that the man in the back row can hear each word.

The microphone is rather like a person with catarrhal deafness: it hears you well only while you keep the pitch of your voice up, and the loudness adequate. But it fails to hear you if pitch or loudness falls too low. What is equally important, if you speak too loudly, your voice blares and becomes painfully unintelligible.

† Editorial, *Ann. Int. Med.*, **37**: 618, 1952.

Loudness, as picked up by the microphone, varies to an extreme degree with the distance between mouth and microphone. If that distance is only one or two inches, then the voice should be soft, low-pitched and confidential, and the same distance must be scrupulously maintained to avoid wide output fluctuations. This is a method that expert announcers use to good advantage. On a speaker's platform it is useful only if there is a portable microphone that can be held evenly and constantly before the mouth as the speaker points to slides, look at people on the platform or moves about. It is not a good method when there is a fixed microphone and you are reading from a text.

If the distance between mouth and microphone is too great, then the man at the controls of the amplifier is forced to turn up full power in the attempt to catch your voice. If you are not too far away, he may succeed; but often he only produces a loud ringing screech that stops the entire proceedings.

The best distance between mouth and a fixed lectern microphone is 7 to 10 inches: at this distance, minor movements of the head produce less fluctuation in loudspeaker output than do the same movements when you are only an inch or so away. The distance is easy to measure by the span of the hand: thumb your chin (not your nose) to the microphone.

The most desirable loudness at this distance is that which you would use in speaking to a group of fifty in a classroom, being careful not to drop the pitch too low at the ends of sentences.

Nothing must come between your mouth and the microphone. Every time you scratch your nose or rub your lip, your hand sharply reduces the volume of sound delivered. It is even worse to hold your manuscript in such a way as to blanket the microphone.

*Lantern Slides*: Visual aid by lantern slides is extremely useful to illustrate something by picture, to convey a concept by diagram, and to emphasize salient facts or data, provided your slides technic is good. But a poor slide technic can ruin your presentation even more surely than can any of the mistakes thus far mentioned. Here are the chief points to be kept in mind to get the best results:

The number of slides to be shown is a function of the time limit assigned. It usually takes over one minute per slide: very few take less and some considerably more. Repeated time trials for the slides are more important to make than those for text, since slides are more likely to go overtime and harder to speed up.

The size of slides should correspond, whenever possible, to that of the standard projector available: 3¼ by 4 inches. If for any reason some other size must be used, be sure not only to get confirmation in writing, and well in advance, of the availability of the size and type of projector you require, but to verify its presence before the meeting starts.

Have your material centered and well within the projectable portion of the slide. This will save you the embarrassment of having a picture decapitated, or the total at the foot of a column chopped off, or the beginnings or ends of lines of text deleted, and also the unanticipated loss of time in asking the operator to shift the slide or raise or lower the lantern.

Top and bottom are cut off more frequently, especially if you arrange your material in a rectangle whose long dimension is perpendicular. Such slides work perfectly in all classrooms, where the screen is square. But in nearly every large auditorium, the screen is rectangular, with the long dimension horizontal, because the screen is intended primarily and solely for the projection of motion picture film, whose frames are rectangles that are invariably horizontal.

But the lateral edges are also vulnerable, because in a large auditorium the projection lantern is placed as far back as possible in order to get the maximum of magnification which the full width of the screen will allow. Therefore, use a mat, to be sure your material is properly centered and limited: the opening of the mat should not exceed 2¼ by 3 inches.

If the slide presents a picture or a photomicrograph, make use of such devices as an arrow, or circle, to call prompt attention to the important features. As you talk about the slide, you can then mention the ringed area, without using the pointer that someone forgot to provide. Be sure to write out every word of your comment on the slide, so that it, too will be properly timed.

The use of the electric torch: arrow pointer calls for comment. Get to the meeting place early to familiarize yourself with this useful gadget. In using it, point it at once to the item you mean to stress, and turn it off promptly when that purpose has been served or else point it directly at your feet until you need it again. It is most disconcerting for the audience to follow the arrow's aimless wanderings all over the screen in anticipation of another point of emphasis that never comes. Between applications, don't shine it in the faces of those in the front row, or that of the chairman.

If the slide presents a diagram or figure, this should be so simple that it can be grasped within seconds and understood without reference to a blue print. The use of contrasting colors makes the figure more intelligible and easier to explain.

If the slide presents data, these should be minimal in number. Those which are most significant should be so designated by means of contrasting colors, or bold-faced type, or underlining, or combinations of these devices.

If the slide presents facts in text form, they should be few, arranged preferably in outline form, and with the separate members of the outline identified by numbers.

In planning the arrangement of all slide material, take a leaf out of the book of the commercial advertiser. He knows he has only seconds to catch the eye of the public: so he uses the simplest picture, the fewest words, the brightest colors, the biggest type for the most important thought, all to make the most striking effect at a glance.

Visibility by the man in the last row is the chief factor that limits the amount of material that should go on a slide. In order to be just legible, the width of every part of a letter must subtend an angle of 1′, and the height and width of the whole letter must subtend an

angle of 5′; that is, an angle whose apex is at the pupil of the viewer and which has an opening of 5′, the overall dimension of the letter. This fact is the basis of the Snellen Test Chart for measuring visual acuity. Now to subtend an angle of 5′ at the pupil of the man in the last row 200 feet from the screen, the letter on the screen must be 3 inches high and wide. (Multiply the distance from the screen by 0·001425 to get the dimension of the letter). If the screen is 15 feet wide, then a single line of text on the screen can have no more than 60 letters and spaces, if that text is to be just readable by a man in the last row, if he has 20/20 vision. To be easily readable, the line must have decidedly fewer letters and spaces. To be safe in planning your slides, you must know the size of the screen and its distance from the back row.

Leave the slide on the screen long enough for everyone to read it. This usually takes half-again as long for the other fellow as it does for you, so give him a break in your timing.

It is better to signal for the next slide with a buzzer or "clicker," if available, than to say "next slide," lest the operator mistake a word in your text for such a signal. A recent speaker lost valuable time because the operator shifted slides when he heard the word, "Dextran."

These have been the "Do's" to be observed in lantern slide technic. Even more important are the "Don't's".

The most important one is this: Don't put too much on a slide. If it is a picture or a photomicrograph, don't have too much irrelevant material, such as the whole cross-section of an organ, thereby dwarfing into insignificance the crucial part of the picture. If you wish to show proportion or relations, then use a second slide for further detail.

Don't project a complicated diagram: it takes too long to decipher.

Don't put too many data on a single slide, especially irrelevant data. Yet this unhappy mistake is the one most frequently committed: the author is too lazy to construct a brief summary of salient data, so he photographs instead a detailed table that will occupy a full page in the printed paper.

Don't project whole paragraphs of running text. Use outline form and telegraphic style to get the few important facts across most quickly. If there are more facts, use two slides.

Don't distract your audience in any of the following ways: Don't talk away from the slide on the screen: your comments should be to emphasize or amplify what is in sight, not to present new ideas. Don't leave a slide on the screen when it is no longer needed. If you have something new to say before going on to the next slide, ask for "lights, please," or signal the operator by means of a blank slide or by a white card properly placed in your series of slides.

Don't frustrate your audience by whisking a slide off the screen before they have had time to read it.

Don't waste the time of your audience by reading every word and figure on the screen. They can read, too, so confine yourself to brief relevant comments.

Don't use slides with white letters on a black background: their visibility is much less than that of slides with black letters on a white background.

These, then, are the general principles that underlie the proper and effective presentation of a scientific paper before a large audience, and to these the writer has decided to confine himself. But please do not think that your personal problems in presentation have been fully covered in the foregoing advice. They require special study and individual analysis.

Fortunately, you don't have to depend upon your best friend or severest critic to do this for you, although they can be most helpful. It is today a simple and inexpensive matter to have a tape recording made of one of your efforts at public speaking. Then, at first alone, and later in the company of an honest critic, play it back to yourself many times, making notes and encouraging the critic to interrupt.

When you have recovered from the first shock of hearing the voice of an utter stranger come back to you out of the machine, you can begin objectively to assess your most obvious mistakes of presentation: the hurried delivery, the monotonous intonation, the failure to pause between paragraphs, or before important points, as you race through your text. Then, at times when you leave your script and "ad lib" a bit, note the slowness, also the hesitation as you grope for the next word; the falling pitch that kills the ends of sentences, especially if the last word is a proper noun; and all the irrelevant "ah's" and "uh's" that eat up so much precious time; and the disconcerting noises, when every few sentences you nervously clear your throat.

Now, if your ego can still take it, have a motion-picture as well as a sound-track recording made of one of your presentations. See for yourself your distracting, and therefore undesirable habit of scratching your face, rubbing your nose, twisting your ear or tugging on a lock of hair. Do you ever look at the people you are trying to impress, or are your eyes glued to your manuscript? And what of your gestures? Gestures, like spices, add zest and interest, if unobstrusive, appropriate to the matter in hand, and if used sparingly; but better no gestures than too many or the wrong ones, awkwardly made. Their proper use calls for native talent as well as careful training.

This article has been written about the proper presentation of a scientific paper, an infrequent and ephemeral activity, indeed, as far as most of us are concerned. Yet it is an aspect and an actual part of a much more important function in the lives of most of us who present papers: the function of teaching. If you are a teacher, then regardless of your specialty in medical science or practice, you should realize that medical pedagogy is as much a specialty as is chemistry or pediatrics. If you are a teacher, it is your responsibility to perfect yourself in pedagogy as well as in your branch of knowledge, in order to bring your teaching mission to its highest fruition: not only to know, but to be able to impart to others what you know. If you are or hope to be a teacher, this editorial deserves a second reading.

# NOTES AND NEWS

### Nobel Prize in Chemistry

The Nobel Prize for chemistry awarded to Professor Vincent de Vigneaud, of Cornell University, is in recognition of a considerable step forward in medical knowledge. The incentive to his work appears to have been provided by ignorance of the way in which insulin (used to control the health of diabetics) might act.

The professor's most important single piece of research has been the working out of the structure of two hormones produced by the posterior lobe of the pituitary gland and later their synthesis.

"These two hormones are built up of the same components—amino-acids—as are proteins. But although the number of these units is relatively small—eight in each case—their arrangement includes a ring structure which made their synthesis difficult. One of them, oxytocin, makes the uterus contract in childbirth and stimulates the ejection of milk; the other, vasopressin, constricts the blood vessels and increases the reabsorption of water by the tubules of the kidney. They were the first hormones of their kind to be synthesized. A further point of interest was that there were minor differences according to the animal by which the hormone was produced." Professor de Vigneaud, who has won a number of American awards for research earlier, worked on the development of penicillin.

### Protection Against Radiation

Soap and hot water is the layman's most effective measure against atomic radiation according to American experts.

The experts were attending dedication of the U. S. Navy's $8 million Radiological Defence Laboratory at San Francisco.

The Scientists demonstrated exhibits which showed that one of the most effective counter-measures against radiation of ships was drenching them in soapy hot water. The same measures would be effective for human beings according to them.

They also emphasized that radiation effects were ultimately more dangerous than the effects of an atomic blast.

### Safer Anti-Polio Vaccine

The Pasteur Institute of Paris which claims to have produced a safer anti-polio vaccine than that used in the U.S.A., says it will produce the serum on a mass scale subject to the approval of the poliomyelitis conference in Stockholm next month.

This conference will agree on precautionary measures to be taken in vaccine production to avoid what happened in the U.S.A., this year when anti-polio injections were made available at a low cost. Numerous children were taken ill with polio and the injection campaign had to be suspended temporarily.

The French serum was developed in laboratories under the direction of Prof. Pierre, Lepine, head of the Virus Section of the Institute.

### X-Ray Parallel To Raman Effect

Dr. C. V. Raman announced at a meeting of the Indian Academy of Sciences on October 20, 1955, the discovery of a new phenomenon which could advance the study of the atomic structures of elements. The physicist said : "It is a fundamental and deep discovery whose application will be evident in due course."

Dr. Raman termed this discovery as "the X-ray analogue of the well-known Raman Effect observed with ordinary light."

Describing the new effect in a lecture to the Academy, he said : "When a pencil of X-radiation traverses a crystal, it excites the infra-red or heat vibrations of the atomic layers in the crystal and is itself reflected in the process in specific directions but with a change of frequency. Such reflections appear in directions which might be the same but are usually different from the direction in which the X-ray beam would be reflected by the atomic layers at rest."

Dr. Raman explained the new X-ray effect as a natural consequence of the views on the nature of atomic movements in crystals he had propounded recently. According to those views, the atoms in a crystal have a specific set of characteristic vibration frequencies in common and can oscillate in perfect step with each other.

"As a consequence of this situation the X-rays scattered by the electron clouds moving with the atoms can, despite such movements, reinforce each other in specific directions and give rise to reflections of X-rays analogous to those which the atomic layers at rest can give. But there is now a change of frequency of the reflected X-ray beam," he said.

"Of particular interest is the fact that the atomic vibrations are excited by the X-rays even when they are of such high frequencies that they are not thermally excited to any sensible extent. In this respect, the X-ray phenomenon is analogous to the Optical Raman Effect observed in crystals. But there is this important difference between them that the mechanism of the X-ray phenomenon is much more closely akin to that responsible for the absorption of long waves of heat radiation in their passage through a crystal."

### Cultivation of Drug Plant

A Rs. 1,00,000 scheme under the second Five-Year Plan for propagating the cultivation of the medicinal plant *Rauwolfia serpentina* in the State of Mysore has been approved by the Planning Commission.

A complete survey of the occurrence and possibilities of expanding the cultivation of all species of the plant was recently undertaken by the State Forest Department in collaboration with the Forest Research Laboratory, Dehra Dun.

The scheme consists of (1) A complete survey of all species of the plant which are indigenous to Mysore.

(2) Sylvicultural and economic methods of raising plantation of *Rauwolfia serpentina*.

(3) Assay of the active principles and their variation with the age of the plant to enable work to be carried out on the basis of economic yields.

(4) Experiment on the effects of irrigation and manures on the crop.

(5) Examination of possible pests and predators on *Rauwolfia serpentina* in its natural habitat and under plantation conditions. The work will be conducted by the Forest Research Laboratory.

### Expansion of U.P. Mental Hospitals

U. P. Government propose to introduce occupational therapy in the State's mental hospitals, to increase the bed strength by 100 each of the Agra and Bareilly mental hospitals and to set up a new mental hospital for the eastern districts. The 80 acre plot of land, that had been acquired for extending the Agra Medical College Hospital, has been handed over to the mental hospital for starting a farm and other industries to bring it in line with modern trend in treatment which stressed occupational therapy for the cure of the mentally sick.

### Symposium on Indigenous Insanity Cure

A three-day symposium on Rauwolfia, a plant used to make medicines for the treatment of insanity and psychonervous disorders was held at the All-India Institute of Hygiene and Public Health, Calcutta. It was organized by the Pharmaceuticals and Drugs Committee of the Council of Scientific and Industrial Research.

Inaugurating the symposium, Dr. B. C. Roy, said that he knew of two men, one in Calcutta and the other at Patna, who treated persons suffering from insanity with a crude drug made of the plant. Both of them claimed success in a large number of cases.

It was, therefore, important to know what effect Rauwolfia produced on the kidney, liver and other organs. There was need for much greater inquiry than had been possible to undertake so far. Instead of isolated work in different parts of the country, co-ordinated research by a team of botanists, agricultural botanists, pharmacologists and cardiologists was necessary.

Maj-Gen. Sahib Singh Sokhey, Chairman of the Pharmaceuticals and Drugs Research Committee, said that the alkaloids of Rauwolfia were isolated and their therapeutic effects in lowering blood pressure were first established in India. The plant grew plentifully in the country. Indian scientists had studied methods of cultivating the plant, worked out the chemistry of its alkaloids, developed the pharmacology and therapeutics of the drug, and yet the country depended for the supply of the drug on a foreign country and that too at such a high price that the drug was beyond the reach of the majority of ailing people in India.

Col. S. S. Bhatnagar, Director, Cains Research Laboratory, St. Xavier's College, Bombay, spoke on some of the problems connected with Rauwolfia. Dr. B. Mukherjee, Director, Central Drug Research Institute, Lucknow, also took part in the discussion.

### Bengal Chamber's Gift of Rs. 1,71,000

The Bengal Chamber of Commerce and Industry donated a cheque for Rs. 1,71,000/- for construction of a most modern and well-equipped T. B. clinic at Strand Bank Road, Calcutta, providing facilities of treatment at the Clinic and, where necessary, in the patients' homes.

In presenting the cheque Mr. G. A. S. Sim, President of the Chamber, said that it would now be possible for some 40,000 staff of the member firms affiliated to the Chamber and their dependants to receive treatment at the clinic which would be one of the four within the municipal area affording thousands of citizens scientific facilities for the initial examination and diagnosis of T. B. cases, operative and other treatment at the Clinic itself and in suspectible cases, treatment in their own homes by expert staff who would visit the residential areas of registered patients in the mobile unit, the cost of which was also covered by the Chamber's contribution.

### Rs. 60-Lakh Hospital for Bombay Workers

A 400-bed hospital exclusively for industrial workers in Bombay City covered by the Employees State Insurance Scheme will be constructed shortly at a cost of Rs. 60 lakhs. The hospital will be situated in Parel, the industrial area in North Bombay.

An agreement between the Bombay Government and the Bombay Millowners' Association on the construction and administration of the hospital has been finalised.

The hospital which will be known as Mahatma Gandhi Memorial Hospital, will be administered by an autonomous council of six members—two each of the Bombay Government, the Employees State Insurance Corporation and the Bombay Millowners' Association.

The cost of running the hospital will be borne proportionately by the Employees State Insurance Corporation and the Bombay Government.

### World Federation for Mental Health

The 8th Annual Meeting of the World Federation for Mental Health was held in Istanbul, Turkey, from August 21st to 27th 1955, under the distinguished patronage of M. Celal Bayar, President of the Turkish Republic. The Organising Committee was headed by Ord. Prof. Dr. F. Kerim Gokay, Governor and Mayor of Istanbul, and consisted of the officers and members of the Turkish Society for Mental Hygiene.

The meeting was attended by 200 specialists in anthropology, education, mental health, psychology, psychiatry, social science and social work, from 32 countries. Its theme was Family Mental Health and the State, and well-known authorities from 10 different countries spoke on different aspects of this subject, such as: the family and education, the upbringing of small children, the problems of abandoned, backward, and delinquent children, legislation affecting the family, and the special problems of families in rural areas, and those affected by sickness or disablement. Time was allowed for the discussion of each address immediately after its presentation.

A discussion of the effect of cultural changes, such as rapid mechanisation and industrialisation, on the mental health of a population, was led by speakers from 8 other different countries. Small groups met daily to exchange opinions and experiences in connection with mental health and the school, religion, relationships within the family, alcoholism, and psychiatric problems in general medical practice.

# CORRESPONDENCE

*The Editor is not responsible for the views expressed by correspondents*

**Removal of Cosmetic Defects by Dermabrasive Planing**

SIR,—I read Dr. R. J. Maneksha's letter in the *Journal of the Indian Medical Association* (September 16, 1955, page 304) on Abrasive Surgery. I wish to comment on the following points only. Kurtin employs and recommends the use of local anaesthesia with ethyl chloride spray which is made to evaporate quickly with the aid of a blower. This technique and anaesthesia have several advantages, viz., the patient can go home immediately afterwards, no hospitalisation is necessary; skin is firm and to a certain extent bloodless, so the abrasion becomes easier. In reality Kurtin's abrasive technique with revolving steel brushes is an office procedure; need for admission into nursing homes and hospitals is eliminated. General intratracheal anaesthesia has these disadvantages.

Borofax or aseptic gauze dressing for 3 to 4 days has the advantage that the patient can usually wash his face on the 5th day. Use of gentian violet as recommended by Dr. Maneksha would keep the patient away from work for 10 days or so.

In my experience, the Dermabrasive planing technique has one distinct disadvantage in dark coloured races in India, and that is pigmentary disturbance. Some patients are hyperpigmented and others hypopigmented for sometime after the operation. This entails lot of anxiety to patients and the relations. Fortunately, in most cases, this disturbance is only temporary. In acne vulgaris, Kurtin's operation has one additional advantage of preventing further acne lesions on the planed areas, since abrasion removes pilosebaceous apparatus to a certain extent. I am etc.

Irwin Hospital, New Delhi.

P. N. BEHL, M.R.C.P.

**Some Investigations on a Recent Epidemic of a Mystery Disease (Encephalitis?) of Lucknow**

SIR,—In 1954 (July-August) medical circles at Lucknow were perplexed by the appearance of a disease which was called at the time by various names, 'encephalitis', 'mystery fever' or 'brain fever'. The principal symptoms were high fever (105 to 108°F), stiffness of neck, delirium and unconsciousness. Death occurred within 3 to 12 hours of the onset of the disease.

An outbreak of similar type of disease had been reported earlier in June from Jamshedpur and several towns in Eastern India. Evidence adduced seemed to indicate that the epidemic had been slowly moving westward from Jamshedpur. In Lucknow five suspected cases of the disease were brought to the Medical College Hospital in July, and about five more in August. The patients were mostly children. Majority of the clinical tests done at the Medical College hospital failed to detect any known bacterial or protozoal pathogens associated with the disease. A standard mouse inoculation test, in successive passage through mouse, was negative in four fatal cases. The tests were done with blood, faeces and spinal fluids and were performed in the Central Drugs Research Institute. Three animals of C.S.F. 1 group died within two days of inoculation obtained from the 2nd passage but further inoculation of brain material did not cause any death. There was similar non-specific death from inoculation of C.S.F. 3 group. The conclusion is that in all probability C.S.F. of these patients were free from any virus at the time the L.P. was done. We are etc.

Central Drug Research Institute, Lucknow.

B. M. GUPTA, M.S., PH.D. AND B. MUKHERJI, M.B., D.SC., F.N.I.

# REVIEWS

**The Physiological Basis of Medical Practice**—Charles Herbert Best and Norman Burke Taylor. Sixth edition, 1955, 9¼ x 6½ inches, pp. xiii plus 1387, Bailliére Tindall and Cox Ltd., London. Price 91s. 6d.

The sixth edition of this outstanding book is welcome. There is hardly any need for introduction or recommendation of a book which is too well known to the medical students and teachers. The reviewer is glad to find that inspite of the newer conflicts Bright's disease has still retained its place in the classification of kidney diseases.

In page 16, punctate basophilia, a condition of degeneration of erythrocytes, has been referred to the frontispiece showing only the normal picture. Moreover cell marked 4 has not been annotated. Lederer's anaemia has been described both as chronic congenital haemolytic anaemia (p. 80) and as acute haemolytic anaemia (p. 81, para 3). These require correction. A few words about dimorphic anaemia and inclusion of Holger Nielsen technique adopted in U.S.A. and recommended for use by the Royal Life Saving Society in 1952 will increase the usefulness of the book.

**Lectures on Applied Medical Bacteriology**—By D. C. Lahiri, M.B., PH.D., D.T.M. & H., D.BACT., Professor of Bacteriology and Pathology, School of Tropical Medicine, Calcutta. Price Rs. 7/8/-, Pp. 300. Stockists: Messrs. U. N. Dhur & Sons, Calcutta-12.

This book has been compiled with the object to serve as a practical and theoretical guide particularly to post-graduate students of medicine. The experience of the author has been extensively reported with some valuable comments. The lectures, although of great interest to post-graduate students and bacteriologists can be read with profit by clinicians who seek an advanced authoritative knowledge of human bacteriology. We shall be glad if in the next edition are included lectures on general technique in the preparation of culture media, biochemical reaction charts and an index. The printing and get-up leave scope for improvement.

# SUPPLEMENT

## Journal of the Indian Medical Association

VOL. 25, No. 13 CALCUTTA DECEMBER 1, 1955


## XXXII ALL-INDIA MEDICAL CONFERENCE, JAIPUR, 1955

*The 32nd All-India Medical Conference will be held this year at Jaipur on the 26th, 27th and 28th December, 1955. The Working Committee of the Indian Medical Association will meet on the 23rd and 24th December, 1955 and the Central Council of the Association on the 24th and 25th December, 1955.*

*Delegates and Members wishing to attend the Conference should immediately apply to the respective Provincial/State Secretaries, I.M.A. with a copy to the General Secretary, Reception Committee, All India Medical Conference, Jaipur, for necessary certificate on production of which at the nearest D.T.S. Office, single fare double journey concession authority slip for any class will be obtained. Concession tickets will be issued by the railway booking office against production of this slip. Delegates and Members are also requested to bring adequate warm clothing, full bedding and mosquito nets. Jaipur at the time of the conference will be pretty cold. Intending delegates, members and visitors should communicate to the General Secretary, Reception Committee without delay, the date of their arrival at Jaipur. A copy of this intimation should also be sent to the respective provincial and local branch secretary. If the Hony. General Secretary is required to reserve berths for the return journey, the appropriate amount should be sent to him before the 15th December 1955, so that return journey tickets may be purchased and berths may be reserved in due time. On the meter gauge Railway Jaipur is connected with Delhi in the North, to Ahmedabad in the South, to Agra in the East and to far away Karachi in the West. There is no difficulty in reaching it from any part of the country now that Jaipur is served so well by the Indian Airways.*

*If you are coming from the Punjab, you will probably travel via Delhi ; if from the U.P. and further East, then your route will be either via Delhi or via Agra ; if from Central India and beyond, then you may come via Kotah and Sawai Madhopur, and if you are travelling from Bombay or the South, then you will come via Ahmedabad or via Sawai Madhopur.*

*The Reception Committee has arranged to provide you with early morning tea in your room ; breakfast, lunch, afternoon tea and dinner will be served in the Dining Tent. Payment for these will be made by coupons which will be on sale at the various Reception Offices and in the Dining Pandal. Would you, therefore, kindly intimate whether you prefer pure vegetarian food or mixed food so that suitable arrangements may be made in advance? If information is received in good time, families will be provided with due privacy and suitable accommodation as a unit.*

*To avoid congestion at the Railway Station and inconvenience to our guests we suggest that you remit Registration Fee of Rs. 5/- per head to the Organising Secretary or enclose a Postal Order for this sum, crossed in favour of the Organising Secretary, AIMC, Jaipur. Combined Boarding and Lodging Charges, inclusive of sight seeing and transport.*

| | | | |
|---|---|---|---|
| *Adults, per head per day* | ... | ... | *Rs. 9/- to 11/-* |
| *Couple per day* | ... | ... | *,, 18/-* |
| *Child under 12 years per day* | ... | ... | *,, 4/-* |

*For Boarding only :*

| | | | |
|---|---|---|---|
| *Each Breakfast, per head* | ... | ... | *,, 1/8/-* |
| *Each Lunch, per head* | ... | ... | *,, 2/8/-* |
| *Each Afternoon Tea per head* | ... | ... | *,, 1/-* |
| *Each Dinner, per head* | ... | ... | *,, 3/-* |

*for Sight Seeing : arrangements have been provided.*

N.B. *Lodging only, without meals, will not be provided.*

*Hotel Charges : Class I : single room—Rs. 18/- to Rs. 20/- per day ; Class II : Rs. 9/- to Rs. 14/- per day (without food Rs. 2/8/- to Rs. 10/- per day).*

*Jaipur, the city where the conference is going to be held this year was founded in 1728 by Maharaja Jai Sing II. It is well laid out and lighted, with wide (111 feet) and regular main streets which divide it into six rectangular blocks ; it is also a city of colour, as the houses are painted, and the whole town is surrounded by crenellated walls, overhung by rugged hills crowned with forts. The chief buildings are the Maharaja's huge palace in the middle of the city ; a remarkable open-air observatory erected by Jai Singh ; a college ; a public library and a newly started Medical College and hospital ; and a School of Art, for teaching and perfecting the local artistic industries. There is also a fine public garden with a menageries, also there are the Museum, the Hawa Mahal, Maharaja's College, Maharani Gayatri Devi Public School for girls, the Maharani's College for girls and the Secretariat which, as the Head Quarters and Barracks of the famous Man Guards of the old State of Jaipur, perhaps the most imposing Military Barrack in the Country. It now holds the various Departments of the Government of Rajasthan and it is on the spacious grounds of this building that the National Festivals are held on the 26th January and 15th August of each year. The city is a busy and prosperous commercial centre ; its trades comprise jewel cutting and setting, as a variety of precious stones are found locally ; enamel and metal work ; the colour printing of cloths and muslins ; and the treatment of marble and inlay.*

*Places in the immediate neighbourhood of the City which are bound to interest you, are the following : Purnea Ghat and its gardens ; Galta with its sacred tanks and temples ; Amber, the ancient Capital of the old Jaipur State ; the Yajnya Stambha, itself over 200 years old ; the Ramgarh Lake annd the Waterworks that supply the town with such good water and from where you get such a striking view of this excellently laid out City. Amber itself will take a whole of your day, so many are the things to see there and admire. Visitors from Bengal would be specially interested to worship at the temple of Shila Mata which is said to be a Form of Kali and was brought to Jaipur from Bengal by the late Maharaja Mansingh. And finally, there are the Nahargarh Fort and Moti Dungri which in their own characteristic way dominate the North and the South of the City's approaches.*

N.B. *All Communications should be addressed to the Organising Secretary, XXXII All-India Medical Conference, Jaipur and envelopes may please be marked "Accommodation". Please address the Organising Secretary, 32nd All-India Medical Conference, Jaipur, Rajasthan, in the form given below, in any case before the 10th December, 1955*

*Dear Sir,*

*I desire to attend the 32nd All India Medical Conference at Jaipur. I shall be reaching Jaipur by Train/Air on..... at..... and would request you kindly to make arrangements for me as detailed below. (1) Board and lodging for . . males . . females . . children. (2) Accommodation in delegates camp/family suit in camp/private hotel (name of hotel . . ) for . . members. (3) Vegetarian food for . . members, Non-Vegetarian food for . . members. (4) No arrangements for board and lodge needed but reserve . . seats in transport for sight seeing. (5) Return Journey for . . seat/s in . . Class by . . Train/Air to . . on . .*
*Address :—*

*Yours faithfully,*

*Sig.....*

N.B. *In case of any change required to be made in the arrangement intimation will have to be sent at least 10 days in advance. Receipt No. of Money Order or Postal Order etc. may also be quoted.*

## BRANCH NOTES

**AGRA BRANCH**—The annual report of the branch for the year 1954-55 shows that membership increased from 25 to 129. Office bearers for the year 1955-56 were elected with Dr. G. R. Tandon as president, Dr. G. K. Tiagi as Hony. General Secretary and Y. P. Nathani as Hony. Joint Secretary.

**ALIGARH BRANCH**—A meeting of the branch was held on 15-10-55. Eleven members were present. Office bearers for 1955-56 were elected with Dr. D. P. Sharma as president, Dr. J. C. Jolly as Secretary and Dr. R. P. Jain as Joint Secretary. The Secretary was authorised to go into the question of setting up a library for the association.

**ASSAM STATE BRANCH**—A meeting of the Working Committee of the branch was held on 4-10-55. Dr. K. C. Barooah presided. Five members were present. Selection of a candidate for Residency Training Abroad was made. The assistant secretary Dr. B. N. Chaudhury was requested to reorganise the branches of Barpeta and Goalpara. The Editor of "Amar Swasthya" was requested to draft rules for the journals.

**BANARAS BRANCH**—At a meeting of the branch Office-bearers were elected with Dr. Bholanath as president, Dr. R. N. Moitra and Dr. L. R. Mehta as secretaries for the year 1955-56.

**BOKARA BRANCH**—The annual general meeting of the branch was held on 11-9-55 with Dr. P. R. Bhattacharjee in the chair. Office bearers for 1955-56 were elect-

ed with Dr. P. R. Bhattacharyee as president and Dr. A. B. Roy as secretary. The balance sheet of accounts for 1954-55 was passed. It was decided to circulate extract of medical attendance rule to members for opinion.

**CHAPRA BRANCH**—The annual meeting of the branch was held on 1-10-55. Dr. A. B. P. Sinha presided. Office bearers for 1955-56 were elected with Dr. A. B. P. Sinha as president and Dr. L. P. Verma as secretary.

**DAVANGERE BRANCH**—A meeting of the branch was held on 21-8-55 with Dr. B. A. Vasudeva in the chair. Dr. S. V. Govinda Setty of K. R. Hospital, Mysore spoke on "Pitfalls in Diagnosis and Treatment of Diabetes".

* * * * *

A general body meeting was held on 17-9-55 with Dr. G. V. Channarappe in the chair. Office bearers were elected with Dr. B. H. Vasudeva Rai as president and Dr. D. Parvathappe as secretary for 1955-56. The Devangere City Municipality was requested to take up anti-malarial precautions. Films on Facial Palsy and Disorders of the Trigeminal nerve were shown.

**DEHRA DUN BRANCH**—The annual report of the branch for the year 1954-55 shows the total number of clinical and general meetings held during the year were 15 and on an average 30 members were present. Nine executive meetings were held. In the clinical meetings papers and cases twenty in number were read during the year. Dr. S. C. Sen and Dr. A. P. Mittra visited the branch for the first time during this year. Membership was the same as in the previous year. In the academic symposium held this year many distinguished medical men were invited and they participated in the discussion. Dr. (Mrs.) P. I. Chatterjee was elected the president and Dr. Madan Mohan the secretary for the year 1955-56.

**DEORIA BRANCH**—A meeting of the branch was held on 11-9-55 with Dr. S. C. Acharya in the chair. Twelve members were present. It was proposed that in order to arrange better medical supplies and management, representatives of district branches of IMA should be appointed as advisors to all hospitals and similar institutions under the Municipality, Mills and Factories. Dr. R. M. Singh presented a case of "Toad skin" syndrome in a boy of 16 years. He also presented a case of Dermal Leishmaniasis.

**FIROZABAD BRANCH**—In a meeting of the branch Dr. Syed Alauddin was elected the president, Capt. V. N. Chaturvedi, secretary and Dr. U. N. Mehrottra joint secretary of the branch for the year 1955-56.

**FEROZEPORE BRANCH**—A meeting of the branch was held on 13-9-55 with Dr. R. Suri in the chair. Eighteen members were present. It was decided to hold the annual meeting on 27-9-55 and a symposium meeting by the end of October.

**FORBESGANJ BRANCH**—The annual general meeting of the branch was held on 11-9-55 with Dr. T. N. Saha in the chair. Eight members were present. The hony. secretary placed the 1954-55 accounts and 1955-56 budgets before the meeting which were passed. Office bearers were elected with Dr. T. N. Saha as president and Dr. B. K. Sarkar as hony. secretary.

**GHAZIPUR BRANCH**—A general meeting of the branch was held on 3-9-55 for the election of president and vice-presidents of I.M.A., Central Office.

* * * * *

The annual meeting of the branch was held on 1-10-55. Eleven members were present. Dr. M. Z. Rbad and Dr. S. H. Ahmed were respectively elected the president and hony. secretary of the branch for the year 1955-56. Dr. T. N. Dutta read a paper on Combined Chemotherapy of Tuberculosis.

**GORAKHPUR BRANCH**—A meeting of the branch was held on 17-9-55. Dr. S. S. Varma presided. Thirty members were present. The meeting disapproved of the present arrangement of insisting on every individual to go through the full course to become a graduate of medicine first before he can specialise in any of the even non-clinical branches of medicine or taking up for specialisation of subjects like physiology, anatomy of distetion. The state branch was requested to approach

THE NEW BUILDING OF THE RAICHUR BRANCH OF I.M.A. SEEN IN THE BACKGROUND WHERE THE MEMBERS HELD THE ANNUAL MEETING. THIS BUILDING WAS CONSTRUCTED AT A COST OF RS. 15,000/- AND FORMALLY OPENED ON 19-12-54

U.P. Government to order not to charge octori duties on sample of medicines. Dr. S. K. Ray Chowdhury read a paper on Conquest of Spurious Drugs.

* * * * *

The annual meeting of the branch was held on 29-10-55 with Dr. K. N. Srivastava in the chair. Forty-five members were present. Office-bearers for 1955-56 were elected with Dr. C. M. Aga as president, Dr. A. S. Bhalla as hony. general secretary and Dr. J. Pd. Srivastava as joint secretary. Dr. Sarraf cited a case of choroiditis with blurred vision which was treated with Vasodilator drugs. Dr. G. K. Sarraf was congratulated on his acquisition of degrees at London and Vienna. The annual report of the branch for 1954-55 shows an increase in membership. There were 12 monthly meetings during the year. The Working Committee meetings and one emergent meeting were also held. Seventeen papers and cases were read and demonstrated.

**GURDASPUR BRANCH**—A meeting of the branch was held on 11-9-55 with Dr. Santokh Singh in the chair. Sixteen members were present. A paper on Gynaecology was read by Dr. (Lady) S. Sachdev. Office bearers for 1955-56 were elected with Dr. Santokh Singh as president and Dr. B. S. Sachdev as secretary.

**HAZARIBAGH BRANCH**—The annual general meeting of the branch was held on 24-9-55. Dr. B. Sarkar presided. Seventeen members were present. The report of the branch for 1954-55 and the accounts for the same year were adopted. Office-bearers for 1955-56 were elected with Dr. B. Sarkar as president and Dr. P. K. Roy as secretary.

**JAGATDAL BRANCH**—A meeting of the branch was held on 6-9-55 with Dr. S. C. Bhattacharya in the chair. Thirty two members were present. Election of office bearers for the Central and Provincial office was done. Dr. P. N. Ghose, hony. secretary reported about the proceedings of the Branch secretaries meeting held at the provincial office on 4-9-55.

* * * * *

The annual report of the branch for 1954-55 shows that 2 executive committee meetings, 8 monthly meetings of which 3 were clinical meetings were held during the year. In the clinical meetings the following subjects were discussed, (1) Management of Burns by Dr. S. Banerjee of Medical College, Calcutta, (2) Cholera by Dr. A. Mondal of N. R. Sarkar Medical College, (3) Anaemia by Dr. J. B. Chatterjee of the School of Tropical Medicine, Calcutta. Office-bearers for 1955-56 were elected with Dr. S. C. Bhattacharya as president, Dr. P. N. Ghosh as hony. general secretary and Dr. J. N. Moitra as hony. joint secretary.

**JALGAON BRANCH**—The annual meeting of the branch was held on 18-9-55. Office bearers for 1955-56 were elected with Dr. V. B. Davalbhakta as president and Dr. D. R. Kulkarne as hony. general secretary.

**KIRNAHAR BRANCH**—A meeting of the branch was held on 10-9-55 to elect provincial branch office-bearers and president and vice-president of central office, IMA. The meeting also condoled the death of Dr. Bamandas Mukherji, Dr. Kartic Basu, Capt. S. K. Sen of Calcutta and Dr. Upendra Nath Ghosh of Birbhum. The members discussed the problem of quackery. The hony. secretary advised the members to maintain the prestige and dignity of the profession and to harbour good relations amongst themselves.

**KOLAGHAT BRANCH**—A general meeting of the branch was held on 28-8-55 with Dr. S. C. Bera in the chair. Election of office bearers of Bengal Provincial Branch and of the Central office took place.

* * * * *

A meeting of the branch was held on 25-9-55 with Dr. A. K. Chatterjee in the chair. The financial position of the branch was discussed and measures were taken to collect the arrears from members. The meeting also decided that the B.C.G. vaccination and campaign should be continued on a mass scale as there was no report of any harmful effects of B.C.G. vaccination in that area.

* * * * *

A meeting of the branch was held on 30-10-55 with Dr. A. K. Chatterjee in the chair. The annual report for 1954-55 was presented and adopted. The report shows that membership has come up to 23. The members drew attention of the government to the menace of quackery in the area.

**KUTCH PROVINCIAL BRANCH**—A general meeting of the branch was held with Dr. Dalal in the chair. Twenty-five members were present. Dr. Patel gave a talk on the possibilities of expanding surgical relief in rural areas. Dr. S. B. Dhru gave his impressions of the Tuberculosis Workers' Conference at Amritsar. Dr. C. J. Mehta gave a talk on Relief Camps in Kutch. Films on Family Planning and BCG were shown. A group photo of the members was taken.

A Group Photograph of Members of the Kutch Provincial Branch.

*IN*

*RHEUMATIC ARTHRITIS*

**PROTRACTED**

SALICYLATE THERAPY

*WITHOUT*

FALL IN PROTHROMBIN LEVEL

*OBTAINS WITH*

# SUCCI-SALYL

**ENTERIC COATED TABLETS**

*EACH CONTAINING*

Calcium Succinate ... ... ... 150 mg.

Sodium Salicylate ... ... ... 250 mg.

DOSE: 4 tablets t.i.d. before meals. Bottles of 100, 500 & 1000

*Particulars from:*

RAPTAKOS, BRETT & CO., LTD. WORLI, BOMBAY.

*A further step in the PAS therapy of tuberculosis*

# Benzacyl WANDER

CALCIUM BENZOYL-PAS

Clinically dependable PAS derivative of unequalled tolerance for oral treatment

Agreeable taste

Pure substance can easily and conveniently be employed in powder form

Causes neither loss of appetite nor gastro-intestinal irritation

Presentation : BENZACYL powder in packages of 100 gm. and 400 gm.

BENZACYL powder in bags of 4 gm.
Boxes of 25 and 100 bags

BENZACYL tablets of 1 gm.
Packages of 100 and 400 tablets

Dr. A. WANDER S. A., BERNE – Switzerland.

**Sole Importers:**

## Khatau Valabhdas & Company

**PHARMACEUTICAL DEPARTMENT**

**Indian Globe Chambers, Fort Street, BOMBAY 1.**

*Branches at :* Patna, Delhi, Kanpur, Madura, Madras, Adoni, Secunderabad (Dn.) and Bangalore City.

# Terra-Cortril*

*brand of oxytetracycline hydrochloride and hydrocortisone*

## *for combined attack on surface infection and inflammation*

***in a wide range of dermatoses***

**Terra-Cortril topical ointment**

contains 3% TERRAMYCIN* (oxytetracycline hydrochloride) and 1% CORTRIL* (hydrocortisone, free alcohol) in ½ ounce tubes.

***in anterior segment eye disorders***

**Terra-Cortril ophthalmic suspension**

contains 5 mg. TERRAMYCIN (oxytetracycline hydrochloride) and 15 mg. CORTRIL (hydrocortisone acetate) per cc. of sterile suspension, in amber bottles of 5 cc. with sterile eye dropper.

These TERRA-CORTRIL dosage forms simultaneously control or prevent *surface infections* through the action of the broad-spectrum antibiotic TERRAMYCIN, and reduce *inflammation* through the action of hydrocortisone (CORTRIL), the most potent natural anti-inflammatory hormone.[1]

- ***when infection is primary and inflammation co-exists***
- ***when inflammation is primary and infection may occur***
- ***when it is not possible to determine immediately the role of infection in local inflammatory conditions***

Pfizer *World's Largest Producer of Antibiotics*

VITAMIN-MINERAL FORMULATIONS HORMONES

PFIZER EASTERN CORPORATION
New York, Panama, & Brussels
*Exclusive Distributors in India*
RAVISON PHARMACEUTICALS LTD.
P. O. Box No. 1636, Bombay 1, 'Grams: "RAVIPHARM"

* TRADEMARK OF CHAS. PFIZER & CO. INC.

# ARISTAMID

**SULPHASOMIDINE**

6-(sulphanilamido)-2, 4-dimethyl-pyrimidine

## The Most Potent Sulpha With Least Toxic Effects

*combines* :

- GREAT POTENCY
- EXCELLENT TOLERABILITY
- HIGH SOLUBILITY
- HIGH BLOOD LEVELS
- UNIFORM TISSUE DISTRIBUTION
- LOWEST RATE OF ACETYLATION

**This BROAD-SPECTRUM Sulphonamide is available in tablets 0.5g and eye-drops. 10% aqueous solution.**

---

*With*

# ENZYNORM

the enzyme—and acid-deficient stomach regains its normal digestive function. **ENZYNORM** is a standardized equivalent of normal gastric juice containing :

- **Pepsin**
- **Cathepsin**
- **Castle's intrinsic factor**
- **Colloidally bound acid**
- **Healthy gastric mucin**

*Liquid* : 100 and 500 cc. *Dragees* : 25 and 100

NORDMARK

## German Remedies & Trading Co., Ltd.

P. O. BOX No. 1945, BOMBAY-1.

## *Based on the latest developments in* HAEMATOLOGY

**A most modern antianaemic preparation for the treatment of diverse types of anaemias, including macrocytic and microcytic. Livules owe their efficacy to their ability to supply all the factors concerned in the regeneration of the blood.**

*COMPOSITION*

| *Each capsule of Livules contains:—* | |
|---|---|
| *Proteolysed Liver Powder* | *from 50 grs. of fresh Liver.* |
| *Proteolysed Stomach Powder* | *from 15 grs. of fresh Stomach.* |
| *Ferrous Sulphate Exc.* | 1·5 grs. |
| *Thiamine Hydrochloride ($B_1$)* | 5 mgms. |
| *Riboflavin ($B_2$)* | 2 mgms. |
| *Pyridoxine Hydrochloride ($B_6$)* | 0·5 mgm. |
| *Calcium Pantothenate* | 1 mgm. |
| *Niacinamide* | 15 mgms. |
| *Ascorbic Acid (C)* | 30 mgms. |
| *Folic Acid* | 1·5 mgms. (*Livules c Folic Acid*) |
| *Vitamin $B_{12}$* | 5 mcgs. (*Livules c $B_{12}$*) |

**Livules c Folic Acid & $B_{12}$, & Livules without Iron (F.A. & $B_{12}$ present) are also available.**

**LIVULES**

*ALEMBIC CHEMICAL WORKS CO. LTD., BARODA 3.*

Alembic

PHP. 52-4A

## THE NEEDLE SWINGS FARTHER!

**A valuable tonic and nutrient for increasing weight and building up resistance to diseases.**

*COMPOSITION*

| *Each fluid ounce of SHARKOFERROL represents :—* | |
|---|---|
| *Vitamin A (from 40 mins. of Shark Liver Oil approx.)* | *25,000 I.U.* |
| *Vitamin D* | *5,000 I.U.* |
| *Saccharated Oxide of Iron N.F.* | *55 grs.* |
| *Hypophosphites of Lime, Sodium & Potassium B.P.C.* | *12.5 grs.* |
| *Vitamin $B_1$ B.P.* | *3 mgms.* |
| *Vitamin $B_2$ B.P.* | *2 mgms.* |
| *Niacinamide B.P.* | *40 mgms.* |
| *Copper & Manganese* | *Traces* |
| *Palatable Base enriched with Flavoured Malt Extract* | *Q.S.* |

**SHARKOFERROL**

**In 1 lb. Bottles.**

*ALEMBIC CHEMICAL WORKS CO. LTD., BARODA 3.*

Alembic

PHP. 52-3A

# SANIMALT

## PALATABLE DIETARY SUPPLEMENT

Ensures healthy growth and maintenance of body structure.

**Each Oz. of Sanimalt provides :**

| | |
|---|---|
| Vitamin A | 20,000 I.U. |
| Vitamin D | 4,000 I.U. |
| Thiamin Hydrochlor ($B_1$) | 5 mg. |
| Riboflavin ($B_2$) | 1 mg. |
| Nicotinic Acid Amide | 25 mgs. |
| Pyridoxine Hydrochlor ($B_6$) | 1 mg. |
| Calcium Pantothenate | 1 mg. |
| Calcium Glycerophosphate | 250 mgs. |
| Sodium Glycerophosphate | 250 mgs. |
| Ferrous Gluconate | 325 mgs. |
| Cobalt Gluconate | 7.5 mg. |
| Malt & Flavour | Q. S. |

**INDICATIONS:**
In all cases of nutritional deficiency, general debility, convalescence and anaemias, and particularly during pregnancy, to prevent polyneuritis.

**THE SANITEX CHEMICAL INDUSTRIES LTD.**
INDUSTRIAL ROAD, BARODA 3.(INDIA)

## NEW!

# DYSTRINDON

**THREE**
**POWERFUL AMOEBICIDES**
**IN ONE**

*Dystrindon coated tablets contain :*

(1) Chloroquine Diphosphate 60 mg.
(2) Bismuth - Glycolyl - Aminophenyl - Arsanilate 125 mg.
(3) Di-iodohydroxyquinoline 210 mg.

3
THREE IN ONE
DYSTRINDON

Manufactured by
**INDO-PHARMA**
PHARMACEUTICAL WORKS
KOHINOOR ROAD BOMBAY 14

# ELIXIR VITAMIN B COMPLEX

*Contains:*

FOLIC ACID, VIT. $B_{12}$, CHOLINE CHLORIDE BETAINE HYDROCHLORIDE, INOSITOL, ACETYL METHIONINE, GLYCEROPHOSPHATES ETC.

★

A Product
of

## BIRLA LABORATORIES

2, BEERPARA LANE
CALCUTTA-30

# The Antiseptic

ESTD: 1904

A MONTHLY JOURNAL OF MEDICINE AND SURGERY

Gives you up to date Information

52 VOLUME 1955

Volume begins in January—Subscription may commence from any period Back copies may not be available.

SUBSCRIPTION:
INDIA Rs. 7/8-
FOREIGN 15/-Sh.
SINGLE COPY
Re. 1/- in ADVANCE.

The Manager. The Antiseptic, Post Box No: 166, MADRAS-1.

*For the use only of Registered Medical Practitioners or a Hospital or a Laboratory*

# 'MYANESIN'
TRADE MARK

## ELIXIR AND TABLETS

**In anxiety and allied states**
Allays anxiety, apprehension and tension without clouding consciousness.

**In rheumatic conditions**
Its freedom from toxicity by the oral route makes it suitable for routine use.

DOSAGE: *one tablespoonful of elixir or 2 tablets 3 times daily*

'MYANESIN' ELIXIR containing 1 gm. mephenesin in each tablespoonful —8 fl. oz.

'MYANESIN' TABLETS each containing 0.5 gm. mephenesin—Bottles of 25 & 100

*Mephenesin, the active constituent of Myanesin preparations, was discovered in the B.D.H. Research Laboratories.*

*Literature and specimen packings are available on request.*

BRITISH DRUG HOUSES (INDIA) LTD. P. O. Box 1341, BOMBAY 1
*Branches at:* CALCUTTA - DELHI - MADRAS

ARSENO-TYPHOID

The treatment for

FILARIASIS

CALCUTTA CLINICAL RESEARCH ASSOCIATION LTD.
CALCUTTA

MODERN PHARMACOLOGY AND THERAPEUTIC GUIDE

By Rai Dr. A. R. Majumdar Bahadur
Prof. of Clinical Medicine, Medical College, Calcutta, Rtd.

This is according to B. P. 1948 and Addendum '51 and Ind. Pharm. List '46, containing upto-date Pharmacology and Therapeutics exemplified by 500 chosen prescriptions and over 800 extr. pharm. preparations, many recently introduced and adopted in practice, these being indexed under 210 diseases for Treatment in daily practice. It has Indian Food recipes and Electrotherapy.

*A Concise Encyclopaedia of Drug Informations.*

Ninth Ed., Demy 846 pages and 62 diagrams, with Addendum of Recent Advances, 1954: Price Rs. 14/-: Addendum only Rs. 2/-: plus postage.

SCIENTIFIC PUBLICATION CONCERN
9, Wellington Square, Calcutta 13

ITEOL-3

A pleasant and efficient Antiseptic

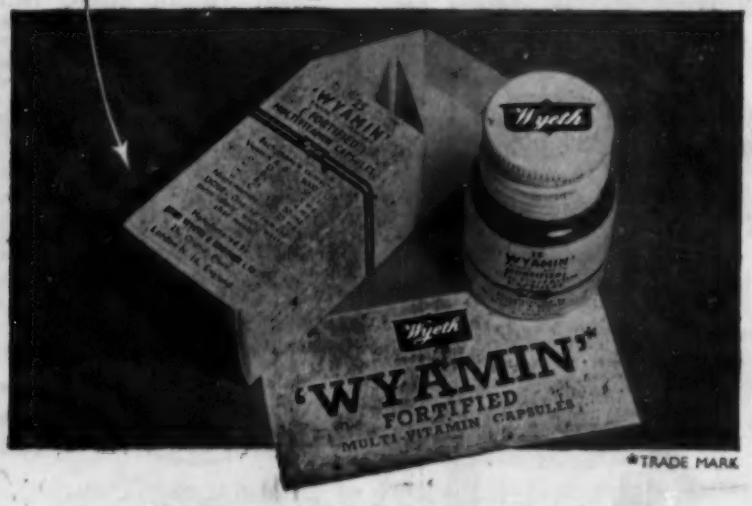
TRADE MARK I.T.L.

Manufacturers:
THE MYSORE INDUSTRIAL & TESTING LABORATORY, LIMITED,
Malleswaram - - Bangalore-3

# malnutrition...

Numerous clinical studies have emphasized the value of supplementary vitamins in the management of malnutrition. 'Wyamin' Fortified deserves a prominent place in the treatment of nutritional deficiency conditions. It is a thoroughly reliable source of vitamins A, $B_1$, $B_2$, C, D and Nicotinamide in quantities especially adjusted to meet sub-tropical requirements. Presented as capsules, 'Wyamin' Fortified ensures uniform dosage and makes administration convenient.

*Supplied in bottles of* 25, 50 *and* 300 *capsules*




*TRADE MARK

**JOHN WYETH & BROTHER LIMITED**

Magnet House, Dougall Road, Bombay 1.

Distributors: GEOFFREY MANNERS & CO. LTD.

Bombay · Calcutta · Madras · New Delhi.

# New !

WHOOPING COUGH

BRUCELLOSIS

TYPHUS

EMPYEMAS

The **first water-soluble** chloramphenicol **for parenteral administration**

MENINGITIS

OTITIS

CONJUNCTIVITIS

ABSCESSES

CYSTITIS

**KEMICETINE** ERBA
**Succinate**

OSTEOMYELITIS

*SOLE AGENTS IN INDIA*
MAC LABORATORIES LTD.,
69, SIR, P. M. ROAD, BOMBAY-1.
CALCUTTA · DELHI · MADRAS · RAJKOT

SEPSIS

SINUSITIS

KERATITIS

BRONCHITIS

*Complete Kemicetine range:* ***Sealed capsules,*** *tablets, syrup; ophthalmic, dermatologic and nasal ointments; otologic, aerosol and antiozena solutions; vaginal and rectal suppositories and* ***aqueous parenteral solution.***


Printed by Sri Tarani Kanta Basu at Sri Gouranga Press Ltd., 5, Chintamani Das Lane, Calcutta-9 and published by him on behalf of the Indian Medical Association from 23, Samavaya Mansions, Corporation Place, Calcutta-13
*Editor*—Dr. P. K. Guha, M.B., M.R.C.S. (Eng.), D.O.M.S. (Lond.)

# Cebetina TABLET

**( C & B Complex Vitamins, Therapeutic Formula )**

Cebetina combines 5 major crystalline components of B-Complex with Ascorbic Acid in a high potency as an harmoniously balanced therapeutic agent for use during and after disease and operation.

*Each tablet contains :*

| | |
|---|---|
| Ascorbic Acid (C) | 150 mg. |
| Thiamine Mononitrate ($B_1$) | 15 mg. |
| Riboflavin Soluble ($B_2$) | 15 mg. |
| Pyridoxine Hydrocloride ($B_6$) | 10 mg. |
| Calcium Pantothenate | 25 mg. |
| Nicotinamide ($B_5$) | 50 mg. |

*Supplied in phials of 12, 25 & 100.*

THE CALCUTTA CHEMICAL CO., LTD., CALCUTTA-29

**for the sensitive ones.....**

**vitamins without fishy odour & smell....**

*PANLYN*

**direct from the spoon**

*Each average teaspoonful 5 c.c. Contains :*

| | |
|---|---|
| Vitamin A | 5000 I.U. |
| Vitamin D | 500 I.U. |
| Thiamine mononitrate | 3 mg. |
| Riboflavin Soluble | 3 mg. |
| Sod. Pantothenate | 3 mg. |
| Pyridoxine Hydrochloride | 1·5 mg. |
| Nicotinamide | 30 mg. |
| Ascorbic Acid | 75 mg. |
| Acetyl Menthionine | 5 mg. |

*In 2 oz. & 4 oz. Phials.*

**PANLYN**

DELICIOUS LIQUID MULTIPLE VITAMINS

**THE CALCUTTA CHEMICAL CO. LTD., CALCUTTA—29.**